PASSAIC RIVER STUDY AREA

ADDITIONAL SITES AND CANDIDATE PRPS FOR THE NEWARK BAY STUDY AREA

PRP DATA EXTRACTION FORM AND EVIDENCE CONCERNING:

BAYONNE BARREL & DRUM COMPANY NEWARK SITE

PREPARED BY: TIERRA SOLUTIONS, INC.

SUBMITTED TO: USEPA REGION II

MAY 2007

LOWER PASSAIC RIVER STUDY AREA PRP DATA EXTRACTION FORM

Bayonne Barrel & Drum Company, Newark, New Jersey Site

CANDIDATE PRP(S):

The August 24, 2004 Agreement for Recovery of Past Response Costs (the "Agreement"), CERCLA Docket No. 02-2004-2023 in the matter of Bayonne Barrel & Drum Superfund Site (the "Site"), was entered into by the U.S. Environmental Protection Agency ("EPA") and thirty-seven (37) "Settling Parties". The Settling Parties consisted of eleven (11) "Performing Parties" and twenty-six (26) "Cash-Out Parties". EPA should take appropriate steps to assure that the PRPs for this Site are <u>not</u> released from their obligations relating to this Site until those PRPs' Site-related obligations in regard to the Lower Passaic River Study Area and the Newark Bay Study Area have been fully identified and satisfied.

The following 11 "Performing Parties" entered into an <u>Administrative Order on Consent for a Removal Action</u>, Docket No. CERCLA-02-2004-2006 (the "Removal AOC"), pursuant to which the Performing Parties have committed to perform certain removal activities:

- Akzo Nobel Coatings, Inc. (for Reliance Universal)
- BASF Corporation
- E.I. du Pont de Nemours and Company
- Hoffman-La Roche Corporation
- Johnson & Johnson (for Personal Care Products Group, Inc.)
- Chevron Environmental Management Company for itself and on behalf of Kewanee Industries, Inc. (for Colonial Printing Ink, Inc., U.S. Printing Ink, Inc., Onyx Chemical Company and Copygraphics)
- Kurz-Hastings, Inc.
- Minnesota Mining & Mfg. Co. (a/k/a 3M Company)
- · National Starch & Chemical Co.
- Pharmacia Corporation (f/k/a [old] Monsanto Company)
- Zeneca, Inc. (for Converter's Ink Company)

The following 26 "Cash-Out Parties" entered into a Site Participation Agreement on July 1, 2003, pursuant to which they made payments to the Performing Parties, and the Performing Parties, among other things, agreed to indemnify the Cash-Out Parties for EPA's Past Response Costs:

- Alumax Mill Products, Inc. (on behalf of Howmet Aluminum Corporation)
- Borden Chemical, Inc.

- Chemical Waste Management, Inc. (as successor to SCA Chemical Services, Inc.)
- Conopco, Inc. (as successor to CPC International, Inc. and d/b/a Ragu Foods, Inc., Chesebrough Pond's, Inc. and Lever Brothers Company)
- D.A. Stuart Oil Company
- Engelhard Corporation
- Ford Motor Company
- General Motors Corporation
- Honeywell International, Inc.
- ICI Americas Inc.
- Millennium Petrochemicals, Inc. (for U.S. Industrial Chemicals, PL)
- Nestle U.S.A., Inc. (for Buitoni Foods)
- · PPG Industries, Inc.
- PRC-DeSoto International, Inc. (f/k/a Products Research and Chemical Corporation)
- Reckitt Benckiser, Inc. (for Airwick Industries, Inc.)
- · Reichhold, Inc.
- Rexam Beverage Can Company/MRC Holdings Co. (on behalf of American Can Co.)
- Segua Corporation/Sun Chemical Corporation
- · Solvent Recovery Services of New Jersey, Inc.
- Technical Coatings Co.
- The Sherwin-Williams Company
- The Valspar Corporation (for Lilly Industries, Inc.)
- Tuscan/Lehigh Dairies, Inc. (f/k/a Tuscan Lehigh Dairies, L.P.)
- U.S. Plastic Lumber Corporation (o/b/o its former division, S & W Waste, Inc.)
- Volkswagen of America, Inc.
- Whittaker Corporation

Payments made by the Cash-Out Parties will be used by the Performing Parties toward funding their obligations to EPA with respect to the Site, including performing under the Removal AOC and making payments as required by the Agreement.

The Settling Parties (i.e., the Performing and Cash Out Parties) intend to enter into a binding agreement with EPA, either an administrative order on consent or a consent decree, at EPA's discretion (the"Final Agreement"), to perform additional removal activities a the Site as approved by EPA, and a separate agreement with the New Jersey Department of Environmental Protection.

As stated in the Agreement (par. 8), "8. EPA alleges that Settling Parties are responsible parties pursuant to Section 107(a) of [CERCLA], and are jointly and severally liable for response costs incurred or to be incurred at or in connection with the Site." (Emphasis added) Accordingly, to the extent hazardous substances released/discharged from the Site to Harrison Creek and, thence, to the Passaic River, or otherwise are migrating to the Passaic River, PRPs for the Site are also properly considered to be PRPs for the Harrison Creek area, the Passaic River and other areas impacted by the Site beyond the original Site boundary lines (i.e., as stated in par. 13.0. of the Agreement, "the aerial extent of the contamination from the property, including any properties to which hazardous substances have migrated or threaten to migrate").

BBB000035

CURRENT MAILING ADDRESS/CONTACT INFO FOR PERFORMING PARTIES:

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Johnson & Johnson Kathryn A. Meisel, Assisstant Secretary One Johnson & Johnson Plaza New Brunswick, NJ 08933

Chevron Environmental Management Co. Mark P. Stella, Superfund Specialist 6001 Bollinger Canyon Road, K-2056 San Ramon, CA 94583

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Kurz-Hastings, Inc.
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Minnesota Mining & Mfg. Co. Robert A. Paschke, Mgr. Corp. Env. Programs 3M Center St. Paul, MI 55144

National Starch & Chemical Co. Alexander M. Samson, Jr., Counsel 10 Finderne Avenue Bridgewater, NJ 08807

Pharmacia Corporation c/o Monsanto Co. (Attorney-in-Fact) Jeffrey R. Klieve Director, Env. Affairs 800 North Lindberg Blvd, St. Louis, MI 63167

Zeneca Inc. Kristopher J. Cori, Attorney 1800 Concord Pike Wilmington, DE 19850

CURRENT MAILING ADDRESS/CONTACT INFO FOR CASH OUT PARTIES:

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Chemical Waste Management, Inc., Stephen T. Joyce, Director-CSMG 4 Liberty Lane West, Hampton, NH 03842

Conopco, Inc. Andrew Shakalis, Associate General Counsel 700 Sylvan Avenue Engelwood Cliffs, NJ 07632

D.A. Stuart Oil Company
Eugene Carline, Vice President –
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Engelhard Corporation Scott W Clearwater, Director Environment, Health & Safety 101 Wood Avenue PO Box 770 Iselin, NJ 08830

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PRC – DeSoto International, Inc. David P Morris, President & CEO PO Box 1800 Glendale, CA 91209 - 1800 General Motors Corporation Michelle T. Fisher- GM Attorney 300 Renaissance Center Mail Code 482-C24-D24 Detroit, MI 48243

Honeywell International, Inc.
John J. Morris – Remediation Portfolio
Director
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ICI Americas Inc.
Samuel E. Malovrh – VP Safety, Health &
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Bridgewater, NJ 08807

Millennium Petrochemicals, Inc. 20 Wight Avenue Hunt Valley, MD 21030

Nestle USA, Inc. Noelia Marti-Colon 800 N. Brand Blvd Glendale, CA 91203

The Solvents Recovery Service of New Jersey, Inc. Virgil W Duffie, III, VP & Assistant Sectretary 5400 Legacy Drive Cluster II, Building 3 Plano, Texas 75024

Technical Coatings Co.
Donald E, Devine, II, VP & Treasurer
52 Chestnut Ridge Road
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4

Reckitt Benckiser, Inc.
Willaim R. Mordan – VP & General
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Reichhold, Inc. David P Flynn 2400 Ellis Road PO Box 13582 Durham, NC 27703

Rexam Beverage Can Company/MRC
Holdings Co.
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Volkswagen of America, Inc. Evelyn L. Sullen, Attorney 3800 Hamlin Road Auburn Hills, MI 48326

BBB000035

FACILITY ADDRESS:

150-154 Raymond Boulevard Newark, Essex County, New Jersey 07105 Block 5002; Lots 3 & 14

The Bayonne Barrel & Drum Company (BB&D) Newark, New Jersey Superfund site (the "Site") consists of approximately 16 acres lying approximately 1,800 feet west of the Passaic River, which empties into Newark Bay roughly one mile south of the Site. Harrison Creek, a tributary to the Passaic River, historically flowed along the eastern border of the Site property and discharged to the Passaic River. The Site is bounded on the north and west by Routes 1 and 9, on the east by the New Jersey Turnpike, and on the south by the All Jersey Multiplex movie theater that was opened in 1991 by National Amusements, Inc. on the former Newark drive-in theater lot. BBA000034, BBA000049, BBA000071, BBD000002, NYA000001

The Sherwin-Williams Company Louis E. Stellato, Vice President, General Counsel & Secretary 101 Prospect Avenue, N.W. Cleveland, OH 44115

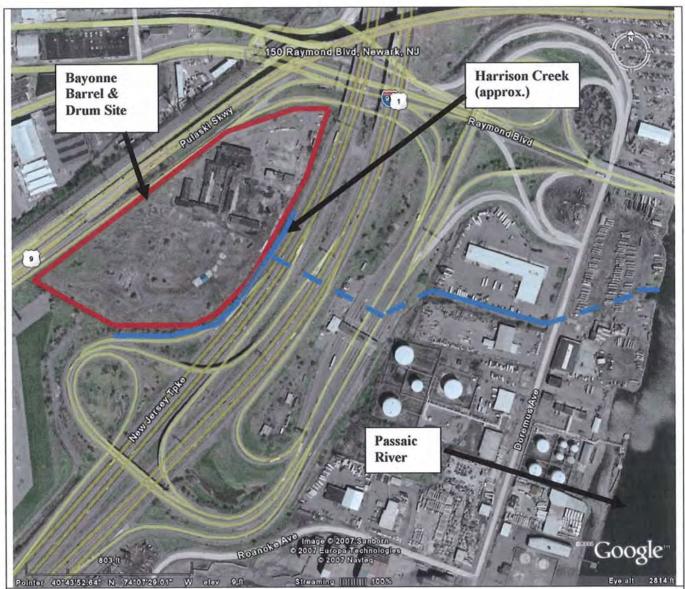
The Valspar Corporation Ronda Bayer, Associate General Counsel 1101 S. Third St., Box 1461 Minniapolis, MN 55415

Tuscan/Lehigh Dairies, Inc. Edward Herman, Authorized Signatory 2515 McKinney Avenue, Suite 1200 Dallas, TX 75201

U.S. Plastic Lumber Corporation Michael D. Schmidt. Chief Financial Officer 2300 Glades Road Suite 440 West Boca Raton, Florida 33431

Whittaker Corporation Eric G. Lardiere. Vice President, Secretary & General Counsel 1955 N Surveyor Avenue Simi Valley, California 93063

The approximate location of the Site is shown on the following aerial photograph:



Bayonne Barrel and Drum Company 150-154 Raymond Boulevard

Newark, Essex County, New Jersey

Aerial Photograph Copyright 2007

Photo Source: Google Earth (Navteq/Europa Technologies/Sanborn)

Site boundary line locations as shown are approximations

FINANCIAL VIABILITY (annual revenue, # of employees):

BB&D filed for bankruptcy in July 1982 and discontinued operations at the Site in September 1983. BBA000025, BBA000049

As discussed in the previous Candidate PRPs section, the Settling Parties have agreed among themselves to either cash-out or remain as a Performing Party to the Agreement. BBB000035

DATES OF OPERATION (include info. on predecessors/successors if known):

While BB&D began drum reconditioning operations at the Site in the early 1940's, a predecessor drum conditioning concern was in operation at the Site as of circa 1931. Reportedly, the former City of Newark landfill encompassed much of the current-day BB&D site during the years 1934 through at least 1947. The approximately 45-acre landfill was later referred to as the "15E Sanitary Landfill" due to its location on the Turnpike. BB&D discontinued operations in September 1983. EPA performed a Removal Action at the Site in 1995. BBA000025, BBA000046, BBA000049, BBA000052, BBA000065, BBA000068

DESCRIPTION OF FACILITY OPERATIONS (list CERCLA hazardous substances used, manufactured or present):

BB&D's operations consisted of the reconditioning of steel drums using caustic solution, steel shot abrasive, incineration, and paint. As of 1973, approximately 1 million units per year were processed. In addition, a waste ash disposal pile – 220 feet x 50 feet x 4 feet - was located in the rear of the property. The rear of the property also contained an estimated 30,000 drums. BBA000002, BBA000004, BBA000048

(Information concerning specific hazardous substances handled and/or present at the Site in connection with Site operations is presented in subsequent sections of this Data Extraction Form.)

SITE SOIL SAMPLING AND CONTAMINATION:

Sampling at the Site indicated that the following hazardous substances were detected in soils at the levels indicated:

PCDDs / PCDFs:

- 2,3,7,8-TCDF up to 3,340 parts per billion ("ppb")
- Total TCDD equivalents ("Total TEQ") up to 911.01 ppb
- Total TCDF up to 750 ppb
- 2,3,7,8-TCDD up to 2.83 ppb
- Total TCDD up to 28.9 ppb
- Total PeCDF up to 400 ppb
- Total PeCDD up to 1.7 ppb
- Total HxCDF up to 180 ppb
- Total HxCDD up to 6.6 ppb
- Total HpCDF up to 72 ppb

- · Total HpCDD up to 12 ppb
- OCDF up to 49 ppb
- OCDD up to 75 ppb

Inorganics:

- Antimony up to 231,000 ppb
- Arsenic up to 390,000 ppb
- Cadmium up to 1,300,000 ppb
- Chromium up to 31,100,000 ppb
- Copper up to 15,500,000 ppb
- Lead up to 198,000,000 ppb
- Manganese up to 4,470,000 ppb
- Mercury up to 43,900 ppb
- Nickel up to 1,050,000 ppb
- Selenium up to 56,300 ppb
- Silver up to 56,700 ppb
- Thallium up to 4,020 ppb
- Zinc up to 11,700,000 ppb

Organics:

- 4-Methyl-2-pentanone (aka methyl isobutyl ketone or MIBK) up to 760,000 ppb
- Chlorobenzene up to 2,800 ppb (USEPA Dioxin Precursor Chemical associated with the formation of dioxin)
- Ethylbenzene up to 1,300,000 ppb
- Styrene up to 1,200,000 ppb
- Tetrachloroethene up to 2,900 ppb
- Toluene up to 11,000,000 ppb
- Trichloroethene up to 300,000 ppb
- Xylenes up to 5,400,000 ppb
- 2-Methylphenol up to 37,000 ppb
- 4- Methylphenol up to 840,000 ppb
- Phenol up to 190,000 ppb
- 4,4'-DDD up to 1,400 ppb
- 4,4'-DDE up to 6,400 ppb
- Alpha chlordane up to 1,200 ppb
- Gamma chlordane up to 1,300 ppb
- Endosulfan II up to 1,200 ppb
- Aroclor PCB 1248 up to 3,400,000 ppb
- Aroclor PCB 1254 up to 430,000 ppb
- Aroclor PCB 1260 up to 120,000 ppb

BBA000048, BBA000071, BBB000033

GROUNDWATER SAMPLING AND CONTAMINATION:

Sampling indicated the following hazardous substances present in the groundwater at the levels indicated:

- Benzene up to 28 ppb
- Dichlorobenzene(s) up to 76 ppb (USEPA Dioxin Precursor Chemical associated with the formation of dioxin)
- Chlorobenzene up to 67 ppb (USEPA Dioxin Precursor Chemical associated with the formation of dioxin)
- Ethylbenzene up to 1,060 ppb
- Toluene up to 150 ppb
- Xylenes up to 2,000 ppb
- 2,4-Dimethylphenol up to 860 ppb
- Phenol up to 877 ppb
- Total PCBs up to 53 ppb
- Petroleum hydrocarbons up to 2,000,000 ppb

BBA000048

SURFACE WATER SAMPLING AND CONTAMINATION:

BB&D effluent, as analyzed and reported to the Passaic Valley Sewerage Commission ("PVSC") in 1975, contained the following contaminants at unknown concentrations: Aluminum, barium, boron, chromium, cobalt, copper, iron, lead, magnesium, manganese, molybdenum, nickel, silicone, tin, and titanium. Additionally, mercury was detected at 26.3 ppb in Site effluent. BBA000003

Samples of wastewater discharging directly to the storm sewer in 1982 were found to be contaminated with benzene, toluene, ethylbenzene, methylene chloride, and 1,1,1-trichloroethane BBA000048

Sediment samples from the floor drain of the drum reconditioning building contained: mercury at up to 53,000 ppb; 4,4'-DDD up to 160 ppb; and 4,4'-DDE up to 140 ppb. BBA000034

Based on calculations provided in the New York Academy of Science's Harbor Project data, <u>current</u> Site runoff contributes between 1 and 9 grams Total TEQ to the Passaic River each year. The calculations are based on data that indicate that approximately 25% of the Site has TEQ concentrations of 80-900 ppb and that the sand/gravel surface soil is lost at a rate of 1996 kg/acre/year. NYA000001

OFF-SITE SEDIMENTS SAMPLING AND CONTAMINATION:

Sediment sampling conducted in the Passaic River indicates contamination matching the hazardous substances reported to be on-Site. A review of sediment data from sampling of the sediment in Passaic River Core 207, located approximately 115 feet southeast of the outfall of

Harrison Creek, indicated the following concentrations of hazardous substances that also match those reported to be on-Site:

Total TCDD up to 7.55 ppb 2,3,7,8-TCDD up to 8.45 ppb 2,3,7,8-TCDF up to 0.44 ppb

Aroclor PCB 1248 up to 5,310 ppb Aroclor PCB 1254 up to 18,100 ppb Aroclor PCB 1260 up to 2,110 ppb

Aluminum up to 19,100,000 ppb
Arsenic up to 35,000 ppb
Barium up to 366,000 ppb
Cadmium up to 13,500 ppb
Chromium up to 560,000 ppb
Cobalt up to 19,500 ppb
Copper up to 431,000 ppb
Lead up to 614,000 ppb
Manganese up to 463,000 ppb
Mercury up to 11,600 ppb
Nickel up to 89,200 ppb
Selenium up to 2,500 ppb
Silver up to 8,600 ppb
Titanium up to 530,000 ppb
Zinc up to 1,190,000 ppb

Benzene up to 22 ppb Toluene up to 20 ppb Xylenes up to 320 ppb

4,4'-DDD up to 2,300 ppb 4,4'-DDE up to 1,790 ppb 4,4'-DDT up to 379 ppb Alpha Chlordane up to 496 ppb Gamma Chlordane up to 295 ppb Endosulfan II up to 120 ppb

PERMITS (provide dates):

NPDES:

A New Jersey Pollutant Discharge Elimination System (NJPDES) permit for discharge to groundwater from the 15E Sanitary Landfill was issued in 1988 to the then-current property owners: BB&D; Frank Langella; the New Jersey Turnpike Authority; Joman Realty; and Edle Realty - owners of the former Newark Drive-in/Multiplex Cinema property, later succeeded by National Amusements, Inc. of the same Dedham, Massachusetts address. BBA000039

POTW (pretreatment):

PVSC Permit #20402430 was effective from 07/12/81 to 07/12/86. BBA000013

NEXUS TO LOWER PASSAIC RIVER STUDY AREA (describe in detail; cite to supporting documentation; date or time period of disposal; list CERCLA hazardous substances and volume, if known):

Direct (e.g. pipe, outfall, spill):

Harrison Creek, a tributary to the Passaic River, originally ran through the BB&D Site on a route adjacent to facility waste lagoons. The waste lagoons reportedly received liquid waste from the drum reconditioning operations. On-Site ditches and waste lagoons were historically routed and discharged to the creek. In 1946, a settling lagoon was constructed to capture the waste formerly discharged to Harrison Creek; however, aerial photographs taken in April 1947 showed that drainage channels connected the lagoon discharged to a "drainage channel" (Harrison Creek) leading to the Passaic River. The channels from the lagoon were sealed by PVSC, however, the lagoon walls frequently washed out and the waste was then discharged to Harrison Creek. By circa 1959, the lagoon was filled in and a wastewater settlement tank was constructed, however, equipment failure continued to allow discharges to reach Harrison's Creek as indicated below in the "Storm Sewer" section. The area was not served by a sanitary sewer until 1973. BBA000002, BBA000012, BBA000034, BBA000048, BBA000049, BBA000057, BBA000058, BBA000059, BBA000064, BBA000075

An outlet ditch from BB&D operations originally discharged the washings from barrels and drums into Harrison Creek, a tributary to the Passaic River, as reported in PVSC memos. BBA000064

In 1946, a lagoon was constructed to capture the discharge to the ditch. However, channels from the lagoon continued to discharge the wastewater to Harrison Creek ("drainage channels") and to the Passaic River. PVSC reported sealing the channels from the lagoon and diverting Harrison Creek; however, leaks from the lagoon reaching Harrison Creek were frequent with at least ten incidents included in PVSC's Stream Contamination reports for May, September, November, December 1947 and February through October 1948. BBA000034, BBA000057, BBA000058, BBA000059, BBA000064

A September 1958 PVSC letter to BB&D indicated that PVSC continued to issue pollution reports. Although copies of any PVSC reports issued between 1948 and 1958 are not currently available, it is evident that the pollution to Harrison Creek, due to leakage from BB&D's lagoon, continued until 1959 when a settlement tank was reportedly constructed to replace the lagoon. BBA000064

Sanitary Sewer (provide name and location of CSO; details regarding CSO overflows and dates):

By January 1973, BB&D's industrial wastewater was discharged into the sanitary sewer to PVSC. BBA000002, BBA000012

By January 1973, BB&D's industrial wastewater was discharged to an 80 foot settling sluice and holding tanks before being released into the sanitary sewer to PVSC. BBA000002

A June 1980 PVSC Sewer Connection Application indicates that 12 million gallons per year of wastewater was discharged to the PVSC combined sewer. BBA000011

Storm Sewer (provide name and location of CSO; details regarding CSO overflows and dates):

A 1980 USEPA Potential Hazardous Waste Site Identification and Preliminary
Assessment reports that Site storm water drains to Harrison Creek "now enclosed in
storm water culverts." The approximate 1% slope towards the north/northeast allowed
collection of runoff to drains along the eastern border of the Site which discharged to the
Passaic River. BBA000009, BBA000034

An NJDEP inspection in 1982 reported BB&D wastewater flowing in to the storm sewer as a result of equipment malfunction. The storm sewer reportedly discharged to Harrison Creek and thence to the Passaic River. This wastewater discharge was found to be contaminated with benzene, toluene, ethylbenzene, methylene chloride, and 1,1,1-trichloroethane. BBA000048

A PVSC Stream Contamination Report and NJDEP documents indicate that pump failure and line breaks at BB&D on January 27-28, 1982 resulted in a spill of 1,000 gallons of caustic material to the storm drain which discharged to Harrison Creek and the Passaic River. Discharges to Harrison Creek were also reported on several other occasions during the period from 1982 through 1984. BBA000014, BBA000016, BBA000017, BBA000024, BBA000026

Runoff:

As stated above, a 1980 USEPA Potential Hazardous Waste Site Identification and Preliminary Assessment reported that Site storm water drained to Harrison Creek. The approximate 1% slope towards the north/northeast allowed collection of runoff to drain along the eastern border of the Site, which discharged to the Passaic River. According to the New York Academy of Science's Harbor Project data, stormwater catch basins for surface runoff from the Site continue, presently, to empty directly or indirectly into drainage ditches connected to the Passaic River. BBA000009, BBA000034

BB&D waste disposal areas/piles from which runoff was evident or likely were reported in several documents:

In 1959, a waste disposal area existed in the northeast corner of the Site (adjacent to the drainage ditch) as evident in an aerial photograph. BBA000034

The existence of a waste ash/sludge pile at the western Site boundary is well documented. This waste ash pile, approximately 220 feet x 50 feet x 4 feet, was discovered in May 1982 and remained on Site as of September 1992. This

disposal area was unlined and had no containment/runoff control. BBA000020, BBA000043, BBA000044, BBA000055

As of December 2000, six (6) waste ash piles – contaminated with dioxin, PCBs, and metals – remained on Site. These remaining ash piles were not removed until September 2005. Based on calculations provided in the New York Academy of Science's Harbor Project data, <u>current</u> runoff from the BB&D Site contributes between 1 and 9 grams Total TEQ to the Passaic River each year. The calculations are based on data that indicate that approximately 25% of the Site has TEQ concentrations of 80-900 ppb and that the sand/gravel surface soil is lost at a rate of 1,996 kg/acre/year. BBA000064, BBA000068, BBB000034, NYA000001

Groundwater:

Groundwater contamination, exceeding ECRA action levels, has been confirmed at the Site. Groundwater generally flows northeast across the Site toward the Passaic River. BBA000048, BBA000065, BBA000068, FCM000007

POTENTIAL NEXUS TO LOWER PASSAIC RIVER STUDY AREA (describe in detail; cite to supporting documentation; list CERCLA hazardous substances; and volume, if known):

Direct (e.g. pipe, outfall, spill):

See above concerning documented direct discharges from this Site.

<u>Sanitary Sewer</u> (provide name and location of CSO; details regarding CSO overflows and dates):

No information is available at this time.

Storm Sewer (provide name and location of CSO; details regarding CSO overflows and dates):

According to the New York Academy of Science's Harbor Project data, stormwater catch basins for surface runoff from the Site continue to empty directly or indirectly into drainage ditches connected to the Passaic River. The BB&D Site is in a historic Passaic River floodplain and is prone to flooding from the river. Surface soil and ash pile contaminants have likely been carried by floodwaters into the storm sewers discharging to the Passaic River. BBA000006, BBA000019, BBA000034, BBA000049

Runoff:

See "Storm Sewer" section for runoff to the Passaic River.

Groundwater:

Soil contaminants and sources (waste ash/sludge piles), some of which have yet to be removed, are sources of groundwater contamination as demonstrated by the contaminants detected in groundwater to date. BBA000065, BBA000068

REFERENCES

TAB NO.	BATES NO.	DATE	DESCRIPTION	
1	BBA000002	01/10/73	PVSC Waste Effluent Survey	
2	BBA000003	03/14/75	PVSC Industrial Waste Survey	
3	BBA000004	04/21/75	PVSC Waste Effluent Survey	
4	BBA000006	01/28/76	Bayonne Barrel & Drum letter to PVSC Re: Correction to Waste Effluent Survey regarding water use in 1974	
5	BBA000009	03/11/80	USEPA Potential Hazardous Waste Identification & Preliminary Assessment	
6	BBA000011	06/06/80	PVSC Sewer Connection Application to Bayonne Barrel & Drum	
7	BBA000012	12/02/80	Bayonne Barrel & Drum Company letter to PVSC Re: Pipeline to Raymond Blvd. Sanitary Sewer	
8	BBA000013	12/12/81	PVSC Sewer Connection Permit	
9	BBA000014	01/27/82	RCRA Generator Inspection Form	
10	BBA000016	02/01/82	PVSC Stream Contamination Report	
11	BBA000017	02/22/82	NJDEP Hazardous Waste Investigation Report	
12	BBA000019	03/24/82	Investigation report prepared by Mario Graglia Re: Raymond Blvd. Flooding and pH levels of 11.0	
13	BBA000020	05/17/82	NJDEP Investigation report prepared by T. Downey Re: Investigation of report of waste pile on site and follow-up to 01/27/82 investigation	
14	BBA000024	03/01/83	PVSC Stream Contamination Report	
15	BBA000025	05/11/84	Letter from Gunster Re: Bayonne Barrel & Drum sale of property and equipment	
16	BBA000026	05/11/84	PVSC Stream Contamination Report	
17	BBA000034	12/00/86	Results of Preliminary Investigation and Sampling in Proposed NJ Turnpike Right-of-way at the Bayonne Barrel & Drum property	
18	BBA000039	02/11/88	NJDEP Letter to Frank Langella Re: ISE Sanitary Landfill, formerly Multiplex Cinema	
19	BBA000043	07/05/88	NJDEP Investigation Report Re: Contaminated soils near Bayonne Barrel & Drum	
20	BBA000044	07/06/88	NJDEP Investigation Report Re: Contaminated soils near Bayonne Barrel & Drum	
21	BBA000046	10/24/88	NJDEP Responsible Party Investigation summary for Bayonne Barrel & Drum	
22	BBA000048	12/07/88	USEPA Site Inspection	
23	BBA000049	01/03/90	RCRA Closure Plan for Bayonne Barrel & Drum prepared by Diversified Environmental Resources, Inc.	
24	BBA000052	01/15/91	DRAFT Remedial Investigation Work Plan for Bayonne Barrel & Drum submitted to NJDEP by P.A.P. Living Trust. Prepared by SML Environmental Services Group, Inc.	
25	BBA000055	09/30/92	NJDEP Site Inspection Summary	

26	BBA000057	01/12/48	PVSC Document, Stream Contaminations during November and December, 1947	
27	BBA000058	06/25/47	PVSC Document, Stream Contaminations during May, 1947	
28	BBA000059	Undated	p. 2 only of PVSC Document, Stream Contaminations during September, 1947	
29	BBA000064	Various	PVSC Stream Contaminations Documents	
30	BBA000065	12/05/00	USEPA letter to NJDEP Re: Remediation needed at Bayonne Barrel & Drum Site	
31	BBA000068	Undated	Bayonne Barrel & Drum Company Removal Action Fact Sheet	
32	BBA000071	03/00/97	Bayonne Barrel & Drum Site Soil Investigation Report prepared by BB&L.	
33	BBA000075	02/04/03	Historic Fill Report	
34	BBB000033	03/18/04	Code Environmental Services transmittal letter to de maximis, inc. re: 2/04 and 3/04 Ash Piles 1-5 Composite Data from EcoTest Labs and Pace Analytical	
35	BBB000034	2005/2006	Clean Harbors Uniform Hazardous Waste Manifests	
36	BBB000035	08/24/04	Agreement for Recovery of Past Response Costs, U.S. EPA Region II, CERCLA Docket No. 02-2004 2023	
37	BBD000002	02/25/07	Guide to Newark: Art & Culture, www.ci.newark.nj.us/Guide To Newark	
38	FMC000007	06/29/99	Letter from USEPA to NJDEP-BFCM transmitting Weston's Project Report (2/14/99) for START's determination of flow direction/tidal influence of groundwater	
39	NYA000001	10/00/06	New York Academy of Science's Harbor Project data	

	Date: January 10, 1973
Plant Ref. No.	

WASTE EFFLUENT SURVEY

(For Industries Served by the Passaic Valley Sewerage Commissioners)

Plant Name: Bayonne Barrel & Drum Company
Address: 150 Raymond Blvd., Newark, New Jersey Zip 07105
Person and Title to whom any further inquiries should be directed:
Sal Russomanno - Purchasing Manager
Phone No.: 589-0110
Number of Employees: 175
Number of Working Days Per Week:5
Number of Shifts Per Day:1
Area of Property: Approx. 15 Acres, or Sq. Ft.
Type of Industry and 4 digit U.S. Standard Industrial Classification No.: 3491
Reconditioners of Steel Drums
Finished Product(s): Steel Drums
Average Production: 1 Million units per year
Raw Materials Used: Paint, Caustic, Steel Shot Abrasive
Brief Description of Operations:
Bldg. #1 - Predominantly reconditioning open top drums by fire blastin
and steel shot blasting. No water used.
Bldg. #2 - Reconditioning Miscellaneous steel drums other than drums
from petroleum industry.

BBAG00002

Water received in Gallons (Note: multiply cu. ft. x 7.48)

Purchased water in 1971	from: January - December
1st Quarter	70,207
2nd Quarter	75,615
3rd Quarter	118,932
4th Quarter	45,209
Total Purchased	d 1971:
Well Water	
1st Quarter	None
2nd Quarter	None
3rd Quarter	None
4th Quarter	None
Total well water re	ceived in 1971:
River Water	
1st Quarter	None
2nd Quarter	None
3rd Quarter	None
4th Quarter	None
Total river wat	er taken in 1971:
TOTAL OF A	LL WATER RECEIVED IN 1971: 309,963
Water Use in 1971:	
Water to Product (inclu	ide evaporated and lost water):50%
Water to Sanitary Sewer	90 - 100%
Water to Storm Sewer,	River or Ditch: None
TOTAL WATER	USE IN 1971:
Name of River, Stream, or	Tributary, and location of storm sewer or ditch outlet to river, stream,
or tributary: Passai	c River
TOTAL WATER Name of River, Stream, or	USE IN 1971:

ANSWER THE FOLLOWING QUESTIONS ONLY IF THE PLANT WASTE INCLUDES WASTE ATTRIBUTABLE TO INDUSTRIAL OPERATIONS

(Note: Analyses should be based on a 24-hour composite sample)

	Characteristics of Plant Waste dischar Indicate units of measure where app		combined sewer,	after treatment
a) pH	·	b) Turbidity:	*****************	4
	nperature:			
e) Soli	ids Concentration:			
1)	Total Solids	Volatile	Mineral	
2)	Suspended Solids	Volatile	Mineral	
A COLOR	and Grease Concentration: Floatable Oils			
2)	Emulsified Oils			
g) Ch	lorides			***************************************
h) Ch	emical Oxygen Demand (C.O.D.):			***************************************
i) 5-da	ay Bio-chemical Oxygen Demand (B.O	D.):		
	al organic carbon (T.O.C.):			
hex	tallic Ions—Name and concentration (c. and triv. Antimony, Lead, Mercury, al daily discharge of each metal.)		Nickel; give co	oncentration and
1) Tox	ic Material—Name and concentration	e.g., cyanide salts, et	c.):	
	lvents—Name and concentration:			
n) Re	sins—Name and concentration (Lacq	uers, Varnishes, Synt	hetics):	
o) Da	te and time span of sample			
minute	Explain hours, method of discharge of the country o	week at 100 gal./day	rate) (batch to	wice a day for 20.
A11.	wash water and rinse water	flow into 80 f	tsettling.	sluice for
sepa	ration purposes. Continues	into 10,000 g	al. sub-surf	ace receiving tan
then	automatically sump pump in	nto 60,000 gal.	holding tar	k until approx.,
4:00	A.M. then discharge into s	sanitary sewer.		

Characteristics of Plant Discharge to Indicate units of measure where applicable (Storm Sewer, River, or Ditch, after treatment if any. (e.g., Mg/l).
a) pH:	b) Turbidity;
c) Temperature:	d) Radioactive? Yes No
e) Solids Concentration:	
1) Total Solids	Volatile Mineral
2) Suspended Solids	Volatile Mineral
f) Oil and Grease Concentration:	
1) Floatable Oils	
2) Emulsified Oils	
g) Chlorides	
h) Chemical Oxygen Demand (C.O.D.):	
늘 집에 집에 얼마를 들어 되었다면 하는데 하면 그렇게 하다면 하는데 되었다.	D.D.):
j) Total Organic Carbon (T.O.C.):	·
hex. and triv. Antimony, Lead, Mercury total daily discharge of each metal.):	(Important—list each metal in waste, e.g., chromium, Copper, Vanadium, Nickel; give concentration and
1) Toxic Material—Name and concentration	(e.g., cyanide salts, etc.):
m) Solvents-Name and concentration:	
n) Resins-Name and concentration (Lacquete and Concentrati	quers, Varnishes, Synthetics):
Do you pretreat any waste before discharge?	
	e removed:

shall be those shown in the 13th edition of S Wastewater, where applicable. If no proceed	spling and making analyses shall be given. Procedures Standard Methods for the Examination of Water and dure is applicable, the laboratory is to describe methods.

Signature and title of person preparing report

2 Brown

BAYONNE BARREL AND DRUM CO. 154 RAYMOND BLVD. NEWARK, NJ 07105

MARCH 14,1975

ANSWER THE FOLLOWING QUESTIONS ONLY IF THE LANT WASTE INCLUDES WASTE ATTRIBUTABLE TO INDUSTRIAL OPERATIONS

(Note: Analyses should be based on a 24-hour composite sample)

a) pH: 11.9	b) Turbidity:	360.
c) Temperature: 68°		NoX
e) Solids Concentration: 1) Total Solids 62,000 2) Suspended Solids 38,000	Volatile 27,000	Mineral 35,000 Mineral 31,000
f) Oil and Grease Concentration: 1) Floatable Oils		
2) Emulsified Oils		
h) Chemical Oxygen Demand (C.O.D.):		
i) 5-day Bio-chemical Oxygen Demand (B.		
j) Total organic carbon (T.O.C.):	2585	
 Metallic Ions—Name and concentration hex. and triv. Antimony, Lead, Mercury 	(Important-list each meta	l in waste, e.g., chromium
k) Metallic Ions—Name and concentration hex. and triv. Antimony, Lead, Mercury total daily discharge of each metal.) SEE ATTACHED SHEET	(Important—list each meta v, Copper, Vanadium, Nicke	l in waste, e.g., chromium el; give concentration and
k) Metallic Ions—Name and concentration hex. and triv. Antimony, Lead, Mercury total daily discharge of each metal.) SEE ATTACHED SHEET 1) Toxic Material—Name and concentration None	(Important—list each meta v, Copper, Vanadium, Nicke m e.g., cyanide salts, etc.):	l in waste, e.g., chromium
k) Metallic Ions—Name and concentration hex. and triv. Antimony, Lead, Mercury total daily discharge of each metal.) SEE ATTACHED SHEET 1) Toxic Material—Name and concentration None	(Important—list each meta v, Copper, Vanadium, Nicke m e.g., cyanide salts, etc.):	l in waste, e.g., chromium
k) Metallic Ions—Name and concentration hex. and triv. Antimony, Lead, Mercury total daily discharge of each metal.) SEE ATTACHED SHEET 1) Toxic Material—Name and concentration None	(Important—list each metally, Copper, Vanadium, Nicke	l in waste, e.g., chromium
k) Metallic Ions—Name and concentration hex. and triv. Antimony, Lead, Mercury total daily discharge of each metal.) SEE ATTACHED SHEET 1) Toxic Material—Name and concentration None m) Solvents—Name and concentration:	(Important—list each metal, Copper, Vanadium, Nicke	l in waste, e.g., chromium el; give concentration and

m. Kon no

NEWARK, NJ 07105	MARCH 14,1975 Based on 24 hr. composite sample of plant waste. Storm Sewer, River, or Ditch, after treatment if any. Le.g., Mg/l).
a) pH: 10.7	b) Turbidity: 1100.
c) Temperature: 69	
e) Solids Concentration:	
1) Total Solids 5,440	Volatile 340 Mineral 4100
	Volatile 860 Mineral 3800
f) Oil and Grease Concentration: 1) Floatable Oils	
g) Chlorides 2600.	
h) Chemical Oxygen Demand (C.O.D.):	4100.
	O.D.); 270
	1690.
hex. and triv. Antimony, Lead, Mercur total daily discharge of each metal.): SEE ATTACHED SHEET.	(Important—list each metal in waste, e.g., chromium y, Copper, Vanadium, Nickel; give concentration and
1) Toxic Material—Name and concentration	(e.g., cyanide salts, etc.):
	······································
n) Resins-Name and concentration (Lace	quers, Varnishes, Synthetics):
o) Date and time span of sample: 24 ho	our composite of Effluent
Do you pretreat any waste before discharge?	
If so, describe process and disposal of residue	e removed:
	, , , , , , , , , , , , , , , , , , ,
shall be those shown in the 13th edition of S	opling and making analyses shall be given. Procedures Standard Methods for the Examination of Water and dure is applicable, the laboratory is to describe method

Signature and title of person preparing report

GARDEN STATE LABORATORIES, INC.

Public Health Microbiology-Chemistry. Milk Foods Waters

399 Stuyvesant Avenue Irvington, N. J. 07111

> Telephone 201-373-8007

MATHEW KLEIN, M.S , Director

Narch 25,1975

BAYONNE BARREL & DRUM CO. 154 RAYMOND BLVD. NEWARKNJ,

SEMI QUANTITATIVE SPECTRO ANALYSES OF METALLIC IONS IN WASTE DISCHARGE 24 HR COMPOSITE OF MARCH 14,1975.

B2 Brown color	Bl Green color
Aluminum m	m
Antimony nd	nd
Barium L	Ĺ
Boron T	L
Chromium T	L
CobaltFT	FT
CopperT	T
1 ron m	m
LeadL	L
Magnesium- m	m
Manganese L	L
Molybdenum- FT	L
Nickel VFT	VFT
Silicone m	M
TinVFT	7
Titanium m	m ·
Zinc L	(E.5)
Zerconium ND	FT .
Calcium m-M	m-M
Pottasium M-P	M-P

NOT DETECTED Antimony, Arsenic, Brrilyum, Bismuth, Cadmium, Gallium, Germanium, Gold, INBOTH SAMPLES--- Indinum, Mercury, Palladium, Phosphorous, Platinum, Rhodium, Silver, Vanadium, Indinum, I

CODE: P=Principal---10. to 100%

M=Major---- 1 to 10.% m=Minor---- 0.1 to 1.0% L= Low----- 0.01 to 0.1% T= Trace--- 0.001 to 0.01%

FT= Faint Trace-- 0.0001 to 0.001 %

VFT= Very Faint Trace-- less than 0.0001%

ND= not detected.

BASED ON DRY SOLIDS CONTENT.

M. Chemist

Return to:
PASSAIC VALLEY SEWERAGE COMMISSIONERS
600 Wilson Avenue
Newark, N. J. 07105
(201) 344-1800

	Date:April 21, 1975
Plant Ref. No.	

WASTE EFFLUENT SURVEY

(For Industries Served by the Passaic Valley Sewerage Commissioners)

Plant Name: Bayonne Barre	l & Drum Company	
Address: 154 Raymond B	lvd., Newark, N.J.	Zip. 07105
Person and Title to whom any furth Sal Russomanno - Purchas Phone No.: 589-0110 Number of Employees: 98 Number of Working Days Per Wee	ing Manager	
Number of Shifts Per Day:	1	
Area of Property:19	Acres, or	Sq. Ft.
Type of Industry and 4 digit U.S. Reconditioner of steel d Finished Product(s): Steel d	rums	
Average Production: 800,000	units for year	
Raw Materials Used: Paint,	caustic, steel shot abra	asive
Brief Description of Operations:	Bldg. #1 - Cleaning of o	X.
Bldg. #2 - Cleaning tigh		
		BBACCCOO4

	received in Gallons (Note: multiply cu. ft. x 7.48)
P	urchased water in 19_74 from: January - December
	1st Quarter 4,141,676
	2nd Quarter 4,424,420
	3rd Quarter 3,553,748
	4th Quarter 3,245,572
	Total Purchased 1974: 15,365,416
W	Vell Water
	1st Quarter
	2nd Quarter
	3rd Quarter
	4th Quarter
	Total well water received in 19:
R	iver Water
	1st Quarter
	2nd Quarter
	3rd Quarter
	4th Quarter
	Total river water taken in 19
	TOTAL OF ALL WATER RECEIVED IN 1974: .15,365,416
Water	Use in 19.74.:
W	ater to Product (include evaporated and lost water): 80% 126%
W	Vater to Product (include evaporated and lost water): 80% 26%
	Vater to Storm Sewer, River or Ditch:
	TOTAL WATER USE IN 19:
Name	of River, Stream, or Tributary, and location of storm sewer or ditch outlet to river, stream
	outary:

ANSWER THE FOLLOWING QUESTIONS ONLY IF THE PLANT WASTE INCLUDES WASTE ATTRIBUTABLE TO INDUSTRIAL OPERATIONS

(Note: Analyses should be based on a 24-hour composite sample)

if any. Indicate units of measure whe		mied sewer, after freatment			
a) pH:	b) Turbidity:				
c) Temperature:	d) Radioactive? Yes	No			
e) Solids Concentration:					
1) Total Solids	Volatile	Mineral			
2) Suspended Solids	Volatile	Mineral			
f) Oil and Grease Concentration: 1) Floatable Oils					
2) Emulsified Oils		***************************************			
g) Chlorides					
h) Chemical Oxygen Demand (C.O.I	O.):				
	i) 5-day Bio-chemical Oxygen Demand (B.O.D.): j) Total organic carbon (T.O.C.):				
j) Total organic carbon (T.O.C.):					
k) Metallic Ions—Name and concentration (Important—list each metal in waste, e.g., chromium hex. and triv. Antimony, Lead, Mercury, Copper, Vanadium, Nickel; give concentration and total daily discharge of each metal.)					
1) Toxic Material—Name and concent	tration e.g., cyanide salts, etc.):				
m) Solvents-Name and concentration	1;				
n) Resins-Name and concentration					
o) Date and time span of sample					
Explain hours, method of disch (continuing for 8 hours per day, 5 day minutes at 100 gal./min.) (Continu 3 M.G.D.) etc.	s per week at 100 gal./day rate	e) (batch twice a day for 20			
All wash water and rinse w separation purposes, conti- tank, then automatically s approximately 4:00 A.M. th	nues into 10M gallon s	ub-surface receiving			

	g., Mg/l).			
a) pH:	b) Turbidity:			
c) Temperature:	d) Radioactive? Yes No			
e) Solids Concentration:				
1) Total Solids V	Volatile Mineral			
2) Suspended Solids V	Volatile Mineral			
f) Oil and Grease Concentration:				
1) Floatable Oils				
2) Emulsified Oils				
g) Chlorides				
h) Chemical Oxygen Demand (C.O.D.):				
i) 5-day Bio-chemical Oxygen Demand (B.O.D.):				
			k) Metallic Ions—Name and concentration (Important—list each metal in waste, e.g., chromi- hex. and triv. Antimony, Lead, Mercury, Copper, Vanadium, Nickel; give concentration a total daily discharge of each metal.):	
1) Toxic Material—Name and concentration (e.g	g., cyanide salts, etc.):			
m) Solvents-Name and concentration:				
n) Resins-Name and concentration (Lacquer	rs, Varnishes, Synthetics):			
Do you pretreat any waste before discharge?				
	moved:			

SCHEMATIC SKRICH OF PLANT INDUSTRIAL WASTE PIPING SHOWING VARIOUS PROCESSES. SHOW ALL INTERCONNECTIONS. SAMPLE POIN SHOW BLL INTERCONNECTIONS, SAMPLE POINT (S) TO MUNICIPAL SEVER. BOILER ROOM K. T. How OF F. C. T. HE W SETTLINE





150 RAYMOND BOULEVARD . NEWARK, NEW JERSEY 07105 . 201-589-0110

January 28, 1976

163-500

Passaic Valley Sewerage Commissioners 600 Wilson Avenue Newark, New Jersey 07105

Attention: Mr. Della Pia

Dear Mr. Della Pia:

Reference to our Waste Effluent Survey submitted to Passaic Valley Sewerage, we wish to correct Water Use in 1974.

Correction should be 20% or 3 million gallons Water to Products and 80% or 12 million gallons Water to Sanitary Sewer. All water is discharged directly to Sanitary Sewer with the one exception that when we have a heavy rainfall and our tanks are unable to hold this downpour, we will naturally have a run off which goes directly to the storm sewers. We are also plagued on numerous occasions with flooding on our property due to high tides from the Passaic River and backup through the storm sewers.

If any seepage occurs through any other outlet than the Sanitary Sewer, we have no control over this.

Trusting that this information is sufficient, I remain,

Sincerely,

Sal Russomanno

RRACCOOCG

SR:af

POTENTIAL HAZARDOUS WASTE SITE IDENTIFICATION AND PRELIMINARY ASSESSMENT

SITE NUMBER (to be as-N/00002870

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries

The state of the s	CITE INCUTIFICATION
A. SITE NAME	SITE IDENTIFICATION B. STREET(or other identifier)
BAYONNE DRUM +BARR	
AFLIND Y	D. STATE E. ZIP CODE F. COUNTY NAME
S. OWNER/OPERATOR () Anown)	NJ ESSEX
1. NAME Frank Laugella, 150 Baymon & Ber	Breident florp. (201)589-0110
	4. MUNICIPAL S. PRIVATE G UNKNOWN
a dure in move thete. Se	to Pularki Skyway, Boule 1-9, and werollerge foctour + workhousex employ 150.
Referred to EPA h	
1. NAME Bol Roed	2. TELEPHONE NUMBER (609) 292-9/20
	ASSESSMENT (complete this section last)
APPARENT SERIOUSNESS OF PROBLEM	
1. HIGH 2. MEDIUM 3. LOW	4. NONE 5. UNKNOWN
1. NO ACTION NEEDED (no hazard)	2. IMMEDIATE SITE INSPECTION NEEDED
b. WILL SE PERFORMED BY:	b. WILL BE PERFORMED BY: 4. SITE INSPECTION NEEDED (low priority)
12/11/79	
b. WUL SE PEMPORAED BY:	
DEPARER INFORMATION 1. NAME John Vinning	4. SITE INSPECTION NEEDED (low priority)
PREPARER INFORMATION 1. NAME John John John John John John John John John John John John	4. SITE INSPECTION NEEDED (low priority) 2. TELEPHONE NUMBER 2.12 264-1573 3. DATE (mo.y day, & yr.) 3. SITE INFORMATION 3. OTHER (specify):
SITE STATUS 2. INACTIVE (Those industrial or relative which no low waste treatment, storage, or disposal or as continuing basis, even if intre- pushitys). IS GENERATOR ON SITE!	4. SITE INSPECTION NEEDED (low priority) 2. TELEPHONE NUMBER 2. TELEPHONE NUMBER 2. TELEPHONE NUMBER 3. DATE (movy day, & yr.) 3. JATE (movy day, & yr.) 3. OTHER (specify): 2. TELEPHONE NUMBER 3. OTHER (specify): 2. TELEPHONE NUMBER 3. OTHER (specify): 2. TELEPHONE NUMBER 3. OTHER (specify): 4. OTHER (specify): 4. OTHER (specify): 4. OTHER (specify): 5. OTHER (specify): 5. OTHER (specify): 6. OTHER (specify)

€EPA

POTENTIAL HAZARDOUS WASTE SITE IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION SITE NUMBER (to be as-

2 1/00002870

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE II	DENTIFICATION		
A. SITE NAME		r other Identifier)	
BAYONNE DRUM +BARREL	45K	OUTE1	
NEWARK	D. STATE	E. ZIP CODE	F. COUNTY NAME ESSEX
1. NAME Frank Laugella, Bre 150 Baymon D. Blod M	sident,	florp.	2. TELEPHONE NUMBER (201)589-0110
H. TYPE OF OWNERSHIP	NICIPAL 5.	PRIVATE 6	UNKNOWN
a dure in move thete. Several	Pulashi large Lock	Shyway	, Boute 1-9, and
Befored to EPA by			K. DATE IDENTIFIED (mo., day & yr.)
1. NAME BUL Reed			2. TELEPHONE NUMBER (609) 292-9/20
II. PRELIMINARY ASSESSM	ENT (complete	this section last)	7
APPARENT SERIOUSNESS OF PROBLEM 1. HIGH	IE □5.	инкиоми	
1. NO ACTION NEEDED (no hazard)	2. IMME	DIATE SITE INSPE	CTION NEEDED
1. SITE INSPECTION NEEDED TO THE STATE OF TH	b. WIL	L BE PERFORMED	BY:
E PA	4. SITE	INSPECTION NEED	DED (low priority)
1. NAME John Vimeney	12. TELE	264-15	73 3/1/80.
	INFORMATION .	/	
SITE STATUS 1. ACTIVE (Those industrial or publicipal sites which are being used or waste treatment, storage, or disposal accordance basis, even if links— guently.)	vel (Those sites t	hat include such in	cidents like "midnight dumping" where e site for waste disposal has occurred.)
IS GENERATOR ON SITE!	nerator's four-digi	I SIC Code):	Sme ou & Som are
D. IF APPARENT SERIOUS 1. LATITUDE (degmin-s			OORDINATES UDE (dagminsec.)
ARE THERE BUILDINGS ON THE SITE!	A Service	6.00.	x + Tanke

DOBOCCOOC

Continue On Reverse

3. LIST SUBSTANCES OF GREATES		WHICH MAY B	ED INFORMATION BE ON THE SITE (pl					
4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE. Site is relatively well operated, Hazardon was ten are action returned to prent of origin a carted away to print								
A. TYPE OF HAZARD	B; POTEN- TIAL HAZARD	C. ALLEGED	D. DATE OF					
1. NO HAZARD	(mark 'X')	(mark 'X')						
2. HUMAN HEÄLTH	/			A STATE OF THE CONTRACT OF THE				
s. NON-WORKER S. INJURY/EXPOSURE		T						
4. WORKER INJURY								
B. CONTAMINATION DE WATER SUPPLY								
6. CONTAMINATION OF FOOD CHAIN								
7. CONTAMINATION OF GROUND WATER								
8. CONTAMINATION OF SURFACE WATER								
9. DAMAGE TO FLORA/FAUNA								
to, FISH KILL		V 1						
IT- CONTAMINATION								
12. NOTICEABLE ODORS								
13. CONTAMINATION OF SOIL								
14. PROPERTY DAMAGE								
15. FIRE OR EXPLOSION								
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS	Lilia							
17. SEWER, STORM DRAIN PROBLEMS								
18. EROSION PROBLEMS								
19. INADEQUATE SECURITY								
20. INCOMPATIBLE WASTES								
21. MIDNIGHT DUMPING								
2 2. OTHER (opecify):								

EPA STENTIN	AL HAZARDO	OUS WASTE: 51	TE LOU!		X D:	43
NOTE: The initial identification of a potential ation that an actual health or environmentant Response S	mini threat exi	ists. All identif	ind sites will be a	ssessed un	der the EPA's	
BAYONNE PRYM	BARK	PEC CO	ROUTE	1	ZIP CODE	. 271
NEWA 17/K			NJ.			
	Ÿ					
ITEM	DATE OF DETERMIN- ATION OR COMPLE- TION	ORIME	OF THIZATION	E	N MAKING NTRY DG FORM	DATE ENTERED ON LOG (mo.day,yr)
1. IDENTIFICATION OF POTENTIAL PROBLEM	11/	. 22-76	115			12/70
AF PARENT SERIOUSNESS OF PROBLEM	. I migh	[] MEDIUM	Viov I INO	J J	NKNOWN	4
1 < 1 INSPECTION	12/12	Rules			11.00	1/1/50
A TENTATIVE DISPOSITION TO A SEPTIME HERE AT HELOW! NO ACTION NEEDED	2/7/80	EPA	9	<u> </u> <u> </u>	MENEZ	2/12/50
. REMEDIAL ACTION NEEDED	- '- - '-		-i	 -		
S I A FINAL STRATEGY DETERMINATION () here appropriate from a) below)						
. NO ACTION NEEDED				1 -		
REMEDIAL ACTION NEEDED						
REMEDIAL ACTION NEEDED BUT,						
1 I. ENFORCEMENT ACTION NEEDED			~			
1111 CASE DEVELOPMENT PLAN PREPARE	0			4		
12) ADMINISTRATIVE ORDER ISSUED			-:			

EPA Form T2070-1 (10-79)

PHONE CALL DISCUSSION FIELD TRIP RECORD OF OTHER (SPECIFY) COMMUNICATION (Record of item checked above) 10: Dr. Spean Martin Jacobson Dec. 12, 1979 Robel Mr Hazandous Weste Site Investigation - Bayonne Bonnel & Drum Corp. SUMMARY OF COMMUNICATION The Bayonne Barrel & Drom Corp. is a Metal Drom reconditioning

and new draw manufacoling operation. Wastes generated on site are from residues in draws which are collected and given to a scerenger along with particulates from the metal refinishing operation, Liquids from washing drams, floor drainings and gamitery wester drain to a collection pit, Then pumped to an above ground holding tank. This Tank is drained daily to The Passaic Valley Sawage Comm. Treatment plant, Solids collected at the bottom are combined with the waste given to The scavenger. The scavenger touses & & W Waste, South Kearny N.J. (201) 344 4004, was said to be licenced for the disposal of the various westes.

Mr. Frank Langella, President of Bayonne Barrel & Drum Said That efforts are made to minimize the quantity of westers in barrels accepted by the his firm by both adding a surcharge if large goodities of remaments are in bannels on refusing to accept material

gus pected of being hezardous.

The site and factory are generally clean and wall maintained with the exception of a small area by The open drow incinerator where a purple light had spilled. With the exception of small areas that and

paved with asphalt the site is earth and cinters. question the old Newank City dump, is under the entire The site is not believed to be hazardous but some site. of the wester that are given to the scaringer on passat through to the Passic Willey STP may be dangenous,

NFORMATION COPIES

Table .

1.25

1.00 P

2.5

A MARIE

	unt (specify unit of med	osu	_	_		gor						rese		
. SLUDGE	b. OIL	1	E. SO	LVENT	rs	4	d. CHE	MICALS		e. SOLIDS		AME	I. OTHE	ER
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INIT OF MEASURE	UNIT OF MEASURE	U	NIT OF			-		MEASURE	E U	NIT OF MEAS	URE	UNI	T OF ME	ASURE
(1) PAINT.	X' (1) OILY	· x ·	JAN HA	LOGEN	NATED	.×.	(1) ACI	D3	×	III FLYASH		·× (,	1) LABOR	ATOR
(2) METALS SLUDGES	12) OTHER(*pocify):		NOI	-	OGNTD.		(2) PICH	KLING	T	(2) ASBESTO	s .	(2) HOSPITAL		
(S) POTW		=	(S) OT	HER(#)	pecify):	П	(3) CAUSTICS		1	(3) MILLING/MINE			(3) RADIDACTIV	
(4) ALUMINUM							(4) PES	TICIDES		(4) FERROUS	SMELT. ES	4) MUNICIPAL		PAL
(6) OTHER (*p*clty):							(5) DYE	s/INKs		15) NON-FER	RROUS (5) OTHER(4		R(apec	
							(6) C YA	NIDE	(6) OTHER(specify):					
	ų						(7) PHE	NDLS				4		
			(8) HALOGENS						÷					
							(9) PC B							
				- 0		H	(10) ME		74.3					
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LIST SUBSTANCES O	OF GREATEST CONCER	_	. FORM	_		_	KICITY	in descer	nding o	rder of hazard)		7	-	
1. SUBSTA	NCE _	(m	nack 'X'	"	(mark	ark 'X')		4. CAS	CAS NUMBER 5.		AMOUNT		6. UNIT
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ELD EVALUATION zard in the space pro	HAZARD DESCRIPTI	ON	: Pla	ce an	, X, 10	the	box to	indicate	that t	he listed haz	ard exis	ts.	Describe	the
A. HUMAN HEALTH		_			-				-			_		
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2. Estimate the amou	int		a su				roge)TES		
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(1) PAINT.	×.	II) OILY	·×	1111	LOGEN	SATED	. × ·	(1) ACI	DS	×	(I) FLYASH		· x ·	,,, LABO	RATOR
(Z) METALS		2) OTHER(*pecify):	10		N-HAL VENT	0 G N T D			KLING		(2) ASBESTO	5		(2) HOSPI	TAL
(3) POTW			_	13107	HER(#	pecity):		(B) C A U	STICS		(3) MILLING	MINE		(3) RAD(C	ACTIV
(4) ALUMINUM SLUDGE								(4) PES	TICIDES		(4) FERROUS	SMELT. ES	LT- (4) MUNICIPAL		IPAL
(5) OTHER (*pecily):					(5) DYES/INKS (5) NON-FERROUS		ROUS	151 OTHER (spec							
						(8) C Y A	NIDE		(6) OTHER(6)	peclly):					
3								(7) PHE	NOLS						
								(8) HAL	OGENS						
							(9) PC B								
								(101ME	TALS						
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LIST SUBSTANCES O	F	GREATEST CONCER	_	_			_		in desce	nding o	rder of hazard)		_		
1. SUBSTA	NCE	5.1			TOXICITY mark 'X') b. c. d. 4		4. CAS	CAS NUMBER 5.		AMOUNT 6		6. UH			
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IELD EVALUATION	HA	ZARD DESCRIPT	101		_	_	_	box to		that t	he listed haz	ard exis	its.	Describ	e the
A. HUMAN HEALTH	_		-	_	131	-		_	_	-		_			_
	C Y	44.4													
1							-								

S	All. HAZARD DESCRIPTION (continued)	1	
B. NON-WORKER INJURY/EXPOSURE			
		,-	
C. WORKER INJURY/EXPOSURE			
			•
D. CONTAMINATION OF WATER SUPPLY			
		8	
		D	
E. CONTAMINATION OF FOOD CHAIN	*		
		100	
F. CONTAMINATION OF GROUND WATER			
F. CONTAMINATION OF GROUND WATER			
100			
		-1	
G. CONTAMINATION OF SURFACE WATER			
	7		
	- *		

.. Continued From Page 4.

VIII. HAZARD DESCRIPTION (continued)	
4	
I. FISH KILL	
I. FISH KILL	
J. CONTAMINATION OF AIR	
CITY SECTIONAL CONTROL	(2)
T X T	
of drows.	
I I have besides + repainting and Cooting	
odor due to Darre	
of drows.	
L. CONTAMINATION OF SOIL	
= Extra decorate of soir	
M. PROPERTY DAMAGE	

· Continued From Front

HAZARD DESCRIPTION (continu	ed)	
N. FIRE OR EXPLOSION		
4		7/
	-11	1
O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID		
		(0)
		13
	8	
P. SEWER, STORM DRAIN PROBLEMS		
P. SEWER, STORM DRAIN PROBLEMS		
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O. EROSION PROBLEMS		
		999
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Y		
R. INADEQUATE SECURITY		
L H. INADEQUATE SECURITY		
		1
S. INCOMPATIBLE WASTES	*	
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		9

Continued From Page 6

T. MIDNIGHT DUMPING		ESCRIPTION (continued)		
U. OTHER (*pocity):				
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a he made.				
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	150 employee			
there are	150 employee	z ou sita	OPLE D. APPROX. NO.	1
there are	IX. POPULATION DIRE	CTLY AFFECTED BY S C. APPROX. NO. OF PER AFFECTED WITHIN	D. APPROX. NO. OF BUILDINGS	E. DISTANCE TO SITE
LOCATION OF POPULATION IN RESIDENTIAL AREAS	IX. POPULATION DIRE	CTLY AFFECTED BY S C. APPROX. NO. OF PER AFFECTED WITHIN	D. APPROX. NO. OF BUILDINGS	E. DISTANCE TO SITE
LOCATION OF POPULATION IN RESIDENTIAL AREAS IN COMMERCIAL OR INDUSTRIAL AREAS	IX. POPULATION DIRE	CTLY AFFECTED BY S C. APPROX. NO. OF PER AFFECTED WITHIN	D. APPROX. NO. OF BUILDINGS	E. DISTANCE TO SITE
LOCATION OF POPULATION IN RESIDENTIAL AREAS IN COMMERCIAL OR INDUSTRIAL AREAS IN PUBLICLY TRAVELLED AREAS	IX. POPULATION DIRE	CTLY AFFECTED BY S C. APPROX. NO. OF PER AFFECTED WITHIN	D. APPROX. NO. OF BUILDINGS	E. DISTANCE TO SITE
LOCATION OF POPULATION IN RESIDENTIAL AREAS IN COMMERCIAL OR INDUSTRIAL AREAS	IX. POPULATION DIRE B. APPROX. NO. OF PEOPLE AFFECTED X. WATER AN	CTLY AFFECTED BY S C. APPROX. NO. OF PER AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE (specify units)
LOCATION OF POPULATION IN RESIDENTIAL AREAS IN COMMERCIAL OR INDUSTRIAL AREAS IN PUBLICLY TRAVELLED AREAS (parks, schools, etc.) DEPTH TO GROUNDWATER(speci	IX. POPULATION DIRE B. APPROX. NO. OF PEOPLE AFFECTED X. WATER AN Ity unity B. DIRECTION OF F	CTLY AFFECTED BY S C. APPROX. NO. OF PER AFFECTED WITHIN UNIT AREA ND HYDROLOGICAL DA LOW	D. APPROX. NO. OF BUILDINGS AFFECTED TA C. GROUNDWATER USE IN	E. DISTANCE TO SITE (specify units)
LOCATION OF POPULATION IN RESIDENTIAL AREAS IN COMMERCIAL OR INDUSTRIAL AREAS IN PUBLICLY TRAVELLED AREAS (Parks, schools, etc.) DEPTH TO GROUNDWATER(special Color Man H POTENTIAL YIELD OF AQUIFER TYPE OF DRINKING WATER SUPP	IX. POPULATION DIRE B. APPROX. NO. OF PEOPLE AFFECTED X. WATER AN Ity unit) B. DIRECTION OF F	CTLY AFFECTED BY S C. APPROX. NO. OF PER AFFECTED WITHIN UNIT AREA ND HYDROLOGICAL DA LOW CINKING WATER SUPPLY	TA C. GROUNDWATER USE IN F. DIRECTION TO DRINKI	E. DISTANCE TO SITE (specify units)

H. LIST ALL DI	Datable Laboratory	X. WATER AND HYDROLOGICAL	. DA LA (continue			
	RINKING WATER WE	LLS WITHIN A 1/4 MILE RADIUS OF SITE		,		-
1. WELL	2. DEPTH (specify unit)	(proximity to popula	TION tion/buildings)		(mark 'X')	COMMUN-

				4		
. RECEIVING W	ATER					l—î
Perseic SPECIFY US Waste		1 4. LAKES/RESERVOIRS B.	OTHER (OPECITY):		y Liberty	Ancher
		XI. SOIL AND VEGITATI	ON DATA			
OCATION OF	SITE IS IN:	AL SOIL AND TESTIAN	UN DATA			
A. KHUMH	FAULT ZONE	B. KARST ZONE	C. 100 YEAR FLO	ODFLAM		•
E. A REGU	LATED FLOODWAY	F. CRITICAL HABITAT XII. TYPE OF GEOLOGICAL MAT	G. RECHARGE ZO		URCE AQUIFER	
			ERIAL OBSERVE	D .		
	icate the type(s) of	XII. TYPE OF GEOLOGICAL MAT	ERIAL OBSERVE	D ry, the compone		
fark 'X' to ind	icate the type(s) of	XII. TYPE OF GEOLOGICAL MAT geological material observed and spec	ERIAL OBSERVE	D ry, the compone	nt parts.	
fark 'X' to ind	icate the type(s) of	XII. TYPE OF GEOLOGICAL MAT geological material observed and spec	ERIAL OBSERVE	D ry, the compone	nt parts.	
A. CVERBU	icate the type(s) of	XII. TYPE OF GEOLOGICAL MAT geological material observed and spec	ERIAL OBSERVE	D ry, the compone	nt parts.	
A. CVERBU	icate the type(s) of	XII. TYPE OF GEOLOGICAL MAT geological material observed and spec	ERIAL OBSERVE	D ry, the compone	nt parts.	
A. CVERBU 1. SAND 2. CLAY 3. GRAVEL D. MODERA	ICATE the type(s) of	XII. TYPE OF GEOLOGICAL MAT [geological material observed and spec B. BEDROCK (*pecify below) XIII. SOIL PERMEAB	ERIAL OBSERVE ify where necessa X* ILITY	D ry, the compone	nt parts. specify below)	
A. CVERBU 1. SAND 2. CLAY 3. GRAVEL D. MODERA RECHARGE A	N TE (10 to .1 cm/sec. REA 2. NO 3. C	XII. TYPE OF GEOLOGICAL MAT [geological material observed and spec B. BEDROCK (*pecify below) XIII. SOIL PERMEAB	ERIAL OBSERVE ify where necessa X* ILITY	D Try, the compone C. OTHER (4	nt parts. specify below)	
A. CVERBU 1. SAND 2. CLAY 3. GRAVEL D. MODERA RECHARGE A 1. YES 1. YES	N TE (10 to .1 cm/eec. REA Z. NO 3. C	XII. TYPE OF GEOLOGICAL MAT [geological material observed and spec B. BEDROCK (*pecify below) XIII. SOIL PERMEAB B. VERY HIGH (100,000 to 1000 co) E. LOW (.1 to .001 cm/sec.)	ERIAL OBSERVE ify where necessa X* ILITY	D Try, the compone C. OTHER (4	nt parts. specify below)	
A. CVERBU 1. SAND 2. CLAY 3. GRAVEL 3. GRAVEL 1. YES DISCHARGE A 1. YES SLOPE ESTIMATE 2.	N TE (10 to .1 cm/eec. REA 2. NO 3. C REA 2. NO 3. C OF SLOPE 2. S	XII. TYPE OF GEOLOGICAL MAT [geological material observed and spec B. BEDROCK (*pectity below) XIII. SOIL PERMEAB B. VERY HIGH (100,000 to 1000 co E. LOW (.1 to .001 cm/sec.)	ERIAL OBSERVE ify where necessa X'	C. OTHER (nt parts. specify bulow) com/eec.) to .00001 cm/ee	ec,)

1

provide the related i	nformation.				7.7		
E-statuma.	D. DATE	E. EXPIRATION	F. IN COMPLIANCE				
C. PERMIT	(mo.,day,&yr.)	(mo.,day,&yr.)	YES	2. NO	S.UN-		
		1					
					-		
	C. PERMIT	C. PERMIT ISSUED	C. PERMIT D. DATE E. EXPIRATION DATE	C. PERMIT ISSUED DATE	C. PERMIT ISSUED DATE F. IN COMPLIANCE (mark 'X')		

NONE	YES (aummarize in this s	pace)	17. 1. 4.	
		Estation essell wes smoking.	NJ DEP	because
	incinerator	wes		

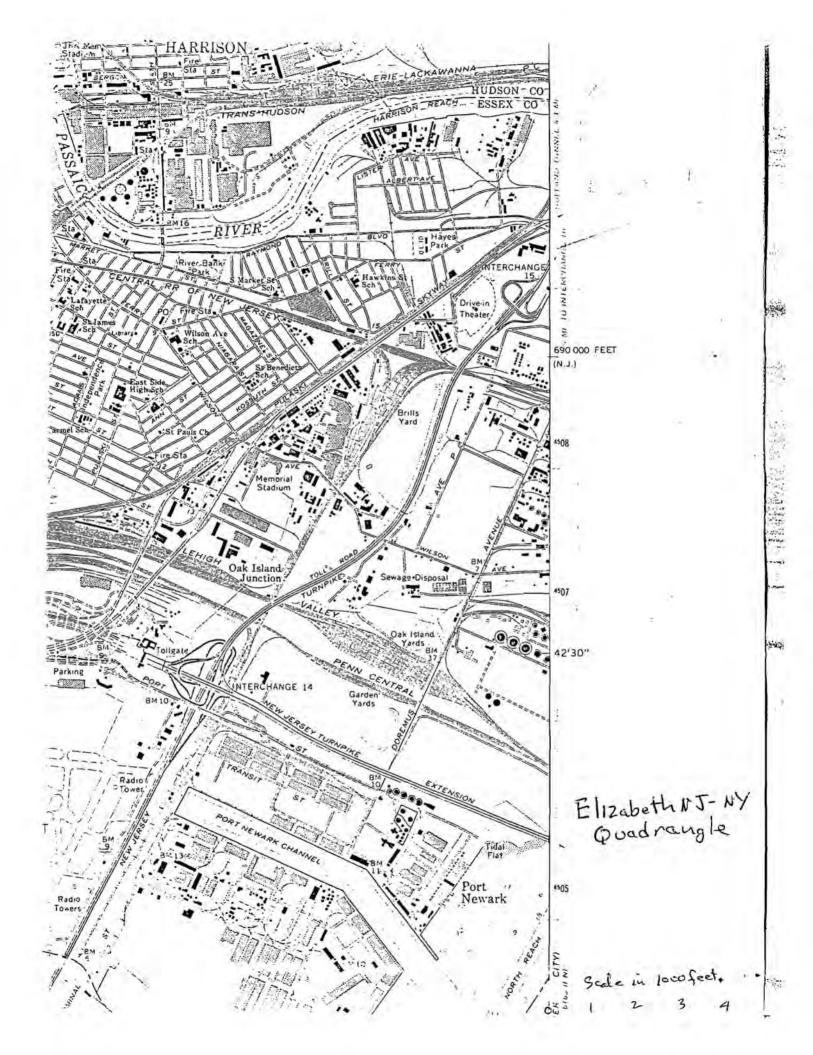
NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition (Section II) information on the first page of this form.

INCINERATORS SITE INSPECTION REPORT (Supplemental Report)

1. INCINERATION OF ALL SUBSTANCES APPROVED BY REGULATORY AGENCY

INSTRUCTION
Answer and Explain
as Necessary.

TYES KANO	7
LIST ALL SUBSTANCES INCINERATED, INDICATING WHETHER OR NOT APPROVAL	EXISTS.
Incinerator used to clean drums. be borned as well as paint and/or	. Anything shipped may
I wit and/or	contine in drum.
be borned as well as fairly	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
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	The state of the s
	Y.
OMBUSTION EFFICIENCY MONITORED	
YES NO (Explain)	,
EMPERATURE, GAS FLOW, RETENTION CALCULATIONS, AND COMBUSTION ZONE N	MONITORED
TYES TO	
ONITORING EQUIPMENT FUNCTIONING PROPERLY	
YES KNO	ă .
DEQUATE MAINTENANCE OF EMISSION CONTROL EQUIPMENT	
TYES [INO waknow	
ONITORING PORTS IN INCINERATOR (Indicate Position)	
TYES [NO open andod	
ASTE FLOW RATE MONITORED	
YES X NO	
IT-OFF DEVICE FUNCTIONING PROPERLY	
I VES INO NOT Applicable	
ACK TEST 98. EPA METHOD	
YES NO Cuknown	
GENCY CONDUCTING TEST	9c. DATE
DEQUATE METHOD FOR DISPOSAL OF SCRUBBER LIQUOR WASTEWATER (Describ	e) . The tokat
TYES ONO TO helding tonk Thanto Parisic	Nother Daniel I was the
DEQUATE METHOD FOR DISPOSAL OF ASH QUENCHING WASTEWATER OR ASH (De	escribe)
TYES INO game as 10	
YPE OF SCRUBBER MEDIUM	
wikuon	
YPE OF SCRUBBER	
vulkum	
IST ELIMINATOR	
TYES NO unknown	



HAZARDOUS WASTE SITE STATUS

Name & Address		Site Number	
BAYONNE DRUM & BARRI	EL CO.	N5 00000 2870	
ROUTE		Staff Responsible	
NEWARK, NEW JERSEY		2045 PINEVES	
County		Agency Responsible	
Essex		EPA State	None
Preliminary Assessment Ratin	<u>g</u>	Date of Assessment	
NO HAZARD		3-11-80	
Tentative Disposition		Date of Disposition	
NO ACTION NEEDED	1	2-12-80	4.
Site Inspection Requested	Date of Request	Date of Inspection	Date of Report
	12-11-79	12-12-79	12-12-79
	By HWEC		
Site Inspection Rating		JRB Rating	
Low			
Sampling Requested	Date of Request	Date of Sampling	Date of Report
Yes No			
Pi-1 64-1-1 P-4-1-1		Data - E Datamaination	
Final Strategy Determination (based on sampling res		Date of Determination	
			. 71
Enforcement by EPA		Date of Case Developm	ent Plan
Yes No			
Enforcement Team Leader		Technical Staff -	
		Legal Staff -	
		S&A Field Staff -	
		FIT Staff -	
Enforcement Case Filed Date		Administrative Order	Issued Date

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	-2-
Current Location of File	File Holder
✓ Assessment Staff	ZOHN ZINENES
Case Development Staff	
Enforcement Division	
Other	

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- 12

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SEPA POTENT	IAL HAZARD	OUS WASTE SITE LOG	SITE NUMBER	
NOTE: The initial identification of a potential ation that an actual health or environm Waste Site Enforcement and Response	ental threat ex	ists. All identified sites will be a	ssessed under the EPA'	
BAYONNE DALIM	a BARK	REL CO ROUTE	1 .	
NEWARK		STATE	ZIP CODE	
SUMMARY OF POTENTIAL OR KNOWN PROBLEM		•		171
ITEM	DATE OF DETERMIN- ATION OR COMPLE- TION	RESPONSIBLE OF ARRITATION OR INDIVIDUAL (EPA, State, Contractor, Other)	PERSON MAKING ENTRY TO LOG FORM	DATE ENTERED ON LOG (mo,day,yr,
DENTIFICATION OF POTENTIAL PROBLEM	11/27	200		12/2
PRELIMINARY ASSESSMENT			5,000	
APPARENT SERIOUSNESS OF PROBLEM	1 mgh	IMEGIUM SILON I INO	NE UNKNOWN	
SITE INSPECTION	12.12	Robert	1 70 7020	Blick
BPA TENTATIVE DISPOSITION	- i			17.7
. NO ACTION NEEDLD	-		† – – – .	_
I I. INVET TATIVE ACTION NEEDED				
REMT DIAL ACTION NEEDED				I
. J. ENFORCEMENT ACTION NEEDED				
in A FINAL STRATEGY DETERMINATION (Lineck appropriate Ham(*) below)				
NO ACTION NEEDED				
H. REMEDIAL ACTION NEEDED				

EPA Form T2070-1 (10-79)

A CIRATEGY COMPLETED

HEMEDIAL ACTION NECDED BUT.

A. ENFORCEMENT ACTION NEEDED

(2) ENFORCEMENT CASE FILED OR

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	_ " "	۸

FOTENTY L HAZARDOUS WASTE SITE

REGION SITE NUMBER

2 NJ 000002870

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

System; Hazardous Waste Enforcement Task Fore	e (EN-335); 401 M	St., SW; Was	hington, Do	20460.			- II.
	I. SITE IDENT						
A. SITE NAME	7	B. STREET	524		. 6.44		
Bayonne Drum & Barrel Co.		US Rt.	189 and	l Pulask	i Skywar	CODE	
Newark	4	N.J.				12.52	
Newalk	II, FINAL DETE						
Indicate the recommended action(s) and agency(ie			rking 'X'	in the appr	priate box	es	
2222202.2.20					ACTION	GENCY	
RECOMMENDATION			MARK'X	EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED			х				
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCE (II yes, complete Section III.)	ES AVAILABLE						三字
C. REMEDIAL ACTION (If yes, complete Section IV.)				S. J			
D. ENFORCEMENT ACTION (If yea, specify in Part E managed by the EPA or the State and what type of	whether the case we inforcement action is	III be primarlly anticipated.)					(a)
E. RATIONALE FOR FINAL STRATEGY DETERMIN	ATION						
F. IF A CASE DEVELOPMENT PLAN HAS BEEN PR THE DATE PREPARED (mo., day, & yr.) H. PREPARER INFORMATION	EPARED, SPECIFY	G. IF AN ENI	FORCEMEN ED (mo., de		10.		y e
M. Hauptman		264-15		R		5/1/81	ay, & yr.)
III. REMEDIAL ACTIONS	TO BE TAKEN W	HEN RESOUR	CES BEC	ME AVAIL	ABLE		-
List all remedial actions, such as excavation, re for a list of Key Words for each of the actions to remedy.							
A. REMEDIAL ACTION	B. ESTIMAT	TED COST		c	REMARKS		
	s						
	s ·			- 20			
	S						
	S		-			_	
	5						
The state of the s	s			*	4		
	s	10 10					
	\$						11.00
D. TOTAL ESTIMATED COST						100	

REULS - P-INTO, UPDATED

SEPA		HAZARDOUS WAS TIVE DISPOSITI		*		2 NJ	0000028	370
File this form in the egional Haza System; Hazardous Waste Enforce						tection Ag	ency; Site	Tracking
		I. SITE IDENTI						
A. SITE NAME		4, 1	US Rt. 18	ond D	Macki	Clanson		
Bayonne Drum & Barrel C	.0.	*	D. STATE	19 and r	UIASKI	E. ZIP CO		-
Newark	8		N.J.			E. ZIP CO	DE .	
		II. TENTATIVE D				-		
Indicate the recommended action(s	s) and agency(ies	s) that should be i	nvolved by ma	irking 'X'	in the appr			
REC	COMMENDATION			MARK'X'	EPA	STATE	LOCAL	FRIVATE
A. NO ACTION NEEDED - NO HAZA	NRD			Х	4.2		難為於	
B. INVESTIGATIVE ACTION(SI NEE	DED (II yes, comp	lete Section III.)	4°4 ,					
C. REMEDIAL ACTION NEEDED (11)	yes, complete Sec	tion IV.).				1		3 - 1
ENFORCEMENT ACTION HEEDER D. be primarily managed by the EPA or is anticipated.)	O (il yes, specify or the State and wh	in Part E whether the	e case will					1 - 4
E. RATIONALE FOR DISPOSITION		: *						-
Wastes are transported well run according to t	off-site by he site insp	a State-11ce pection repor	nsed scave t.	enger.	Facilit	y 15 1a	irly	
F. INDICATE THE ESTIMATED DAT	E OF FINAL DISP	POSITION	G. IF A CASE ESTIMATE (mo., day, &	D DATE DE			SSARY, IND	
H. PREPARER INFORMATION 1. NAME M. Hauptman			2. TELEPHO		A	_	τε (mo., σο /1/81	7, & yz.).
	111. 1	NVESTIGATIVE A	- Yang and Art					
A. IDENTIFY ADDITIONAL INFORMA								
E. PROPOSED INVESTIGATIVE ACT	FIVITY (Detailed I	nlometion)	-					
1. METHOD FOR OBTAINING NEEDED ADDITIONAL INFO.	2. SCHEDULED DATE OF ACTION (mo,dey, & yr)	3. TO BE PERFORMED BY (EPA, Com- tractor, State, etc.)	ESTIMATED			S. REMARK	cs .	
A. TYPE OF SITE INSPECTION					2			
. (2)						اسارت		
Ü		4 .				3.		
L TYPE OF MONITORING	11							
				-		يدر ب		
(2)			Address of the second					
C. TYPE OF SAMPLING				-				

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Y or N

PASSAIC VALLEY SEWERAGE COMMISSIONERS

SEWER CONNECTION APPLICATION

PART I - SECTIONS A-C

SECTION A: GENERAL INFORMATION

A	pp1i	can	t is	4
C	orpo	orat	ion	
Pi	arti	ners	hip	
0	ther			

ocation: 154 Raymond B1	.vd.
Newark, N.J.	Zip Code: 07105
lailing Address: Same	
	Zip Code:
lame, title, address and tele concerning information provid	ephone number of person to contact ded in this application:
Tame of Contact Official: Fr	
ritle: President	Phone No.: 589 alli
ddress: 154 Raymond Blvd., N	Newark, N.J. 07105
lumber of Employees - Full Ti	ime: 160 Part Time: -
umber of Work Days Per Week	. 5
Number of Shifts Per Day:	
s production seasonal? No	F.
lew Users Only: Indicate dat	
f property is owned, indicat	te user desires to commence operation of the Lot and Block Numbers: #5002 Lo
f property is owned, indicate f property is rented, indicate	te user desires to commence operation of the Lot and Block Numbers: #5002 Lo
f property is owned, indicate f property is rented, indicate section B: PROPERTY.	te user desires to commence operation to Lot and Block Numbers: #5002 Lot 1979 Assessed Value: 564,000 ate name and address of Landlord:
f property is owned, indicate f property is rented, indicate SECTION B: PROPERTY rief description of manufact	te user desires to commence operation of the Lot and Block Numbers: #5002 Lot 1979 Assessed Value: 564,000 ate name and address of Landlord: DUCT OR SERVICE INFORMATION turing or other activity performed
f property is owned, indicate f property is rented, indicate section B: PROPERTY.	te user desires to commence operation to Lot and Block Numbers: #5002 Lot 1979 Assessed Value: 564,000 ate name and address of Landlord: DUCT OR SERVICE INFORMATION turing or other activity performed ims
f property is owned, indicate f property is rented, indicate SECTION B: PROPERTY rief description of manufact Reconditioning Steel Drug	te user desires to commence operation of the Lot and Block Numbers: #5002 Lot 1979 Assessed Value: 564,000 ate name and address of Landlord: DUCT OR SERVICE INFORMATION turing or other activity performed ims
f property is owned, indicate f property is rented, indicate SECTION B: PROPERTY OF MANUFACTURE STEEL Drum Manufacture New Steel Drum Manufacture	te user desires to commence operation of the Lot and Block Numbers: #5002 Lot 1979 Assessed Value: 564,000 ate name and address of Landlord: DUCT OR SERVICE INFORMATION turing or other activity performed ims

SECTION C: WATER DATA

	PURCHASED	WELL	RIVER	TOTAL
1st Qtr.	3.1 ml.			
2nd Qtr.	4.1 ml.			
3rd Qtr.	3.2 ml.			
4th Qtr.	3.3 ml.		Ý.	
	1979	- 0.11.15.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	$\frac{13.7}{12.5}$	
Name wate	r supplier: Cit	y of Newark, N	.J. Account#:	
Is well w	ater metered?	Is	river water m	etered?
Water Dis	tribution: Year 1	9 - (Repor	ct Volume in G	Gallons)
<u>Use</u> (List totals in o	gallons per yea	/1 /2	330,000
(a) sani	tary sewer (incl	lude industria	& domestic)	
(b) sepa	rate storm sewer	r, river, or d	itch	y pa
(c) cont	ained in product	0	· · · · · · · · · · · · · · · · · · ·	207
(d) evap	oration	10% .(, .		,370,000
(e) wast	e haulers			187, 6
Name, Add	lress & Registra	tion Number of	Waste Haulers	Used
5. a W	. Waste Disposal	, kearny, N.J.		
Is volume	in 17 (a) meas	ured? No Ho	w?	
Certifica	tion.			
				tott de brez
to me and	mation contained, to the best of complete and ac	f my knowledge	this applica and belief,	tion is famil such informat
attached	pplicant is a co granting me the f the corporatio	authority to	orporate reso sign the appl	lution is ication on
Name of G	Signing Official	· RAVE	FARINA	
	1/ D	111111111111111111111111111111111111111	THE TOTAL PROPERTY.	
Title:	N. L.			
	(1)	1	1//	16.

PART II - SECTIONS D-F

These sections must be completed if the Applicant:

- (a) discharges more than 25,000 gallons per day of either domestic and/or industrial wastes to the sanitary or combined sewer, or,
- (b) discharges toxic wastes or wastes which can have a significant impact on the PVSC treatment works.

Co	ompany Name: DAYONNE BARREL , DRUM CO.
Lc	ocation:
	SECTION D: OPERATIONAL CHARACTERISTICS
I	Discharge of industrial waste is continuous or intermittent _X
I	Discharge of industrial waste occurs between the following hours:
-	Between 3:30 and 5:00 P.M.
1	Industrial Waste is, or may be discharged:
	(a) only to the sanitary (or combined) sewer combined
1	(b) to both the sanitary (or combined) sewer and a separate storm sewer, river or ditch
((c) NPDES Permit Number
I	Describe seasonal variations, if any, giving dates, volumes, rates, hours include variations in product lines which affect waste characteristics.
-	Not seasonal
-	
E	Describe any pretreatment process in use:
-	Settling tank

		NUM
) i	
Describe any	processes used to recycle water:	NON.
scribe any	processes used to recycle water:	NON

SECTION E: SEWER CONNECTION INFORMATION

OUTLET *	SEWER SIZE	DAILY FLOW (GALLONS)	CONTAINS INDUSTRIAL WAST (YES OR NO)		
	6" Pipe	_40,000-gals.	Yes		
	see cali	47,500			
1					

(ATTACH ADDITIONAL SHEETS IF NECESSARY)

Attach a plot plan of the property, showing:

- (a) all existing or proposed sewer and drain lines (including outlets to a storm sewer, river or ditch);
 - (b) sample point(s);
- (c) details of the connection(s) to the municipal (or PVSC) sewer, including the distance and direction of each connection from the nearest street intersection.

*If only one outlet, leave blank.

Number multiple outlets starting with 1.

SECTION F: ANALYSIS OF INDUSTRIAL WASTE

27. Analysis listed below is based on a composite sample of industrial waste taken from the following outlets listed in Section E:

Settling tank (holding)

(See instructions for proportioning samples from more than one outlet)

28. Analytical Data: Concentration values are to be reported in mg/l (ppm) unless specified otherwise; analyze waste for those parameters marked with an asterisk (*), analyze waste for other parameters reasonably expected to be present. Code numbers are for internal use only.

REP	ORT TO THE NEAREST UNIT (EXAMPLE: 150 mg/1)	': X
CODE	PARAMETER	VALUE
* 0100	Color (Apha Units)	3000
0200	Radioactivity (PL-1)	
* 0500	Total Solids	42,034
* 0505	Total Volatile Solids	13,142
* 0510	Total Mineral Solids	27,892
* 0530	Total Suspended Solids	2266
* 0540	Volatile Suspended Solids	1002
* 0550	Mineral Suspended Solids	1264
* 0070	Turbidity (JTU)	67
0550	Emulsified Oil or Grease	861
* 0940	Chlorides	10,080
* 0945	Sulfates	2560
* 0310	Biochemical Oxygen Demand (BOD)	27000
* 0340	Chemical Oxygen Demand (COD)	41360
* 0680	Total Organic Carbon (TOC)	1820

CODE	PARAMETER	VALUE
0745	Sulfide	496
0740	Sulfite	195
8260	Surfactants (MBAS)	*
* 9000	pH (standard units) (range)	6.45
0625	Kjeldahl N as N	
0610	Ammonia as N	142.8
0620	Nitrate as N	5.85
0615	Nitrite as N	
0507	Ortho Phosphates as P	0:19
pie	ortho Phosphates as P	ut

(11-3)

REPORT TO THE NEAREST HUNDREDTH: 0.XX (EXCEPT WHERE INDICATED) (EXAMPLE: 0.36 mg/1)

CODE	PARAMETER	VALUE
1097	Antimony (Sb)	1.30
1002	Arsenic (As)	0.620
1022	Boron (B)	C 200
1027	Cadmium (Cd)	0.186
1034	Chromium Total (Cr)	0.66
1042	Copper (Cu)	6.39
1045	Iron (Fe)	32.0
1051	Lead (Pb)	1.72

29. Samples collected by:

REPORT TO THE NEAREST HUNDREDTH: 0.XX (EXCEPT WHERE INDICATED) (EXAMPLE: 0.36 mg/l)

PARAMETER	VALUE
(Report to Mercury 0.XXX)	0,0263
Nickel (Ni)	0.29
Selenium (Se)	KO.001
Siver (Aq)	0.052
Tin (Sn)	0,63
Zinc (Zn)	4.4
(Report to Pesticides 0.XXX)	
Phenol	15.4
	(Report to Mercury 0.XXX) Nickel (Ni) Selenium (Se) Siver (Aq) Tin (Sn) Zinc (Zn) (Report to Pesticides 0.XXX)

Date:

30.	Samples analyzed by:	Dat	e:
	Products being manufactured when sa	mple was collected:	
Cert	ification:		
the If t	information contained in Part II of best of my knowledge and belief, su he applicant is a corporation, a co	ch information is true, exporate resolution is at	complete, and accurate tached granting me the
	ority to sign the application on be		
31.	Name of Signing Official: Ray 1	E. Farina	
	Title: Vice	President	7
	June 9, 1980 Date	Signature	equia

Bayonn BORREL & DE

150 RAYMOND BOULEVARD + NEWARK, NEW JERSEY 07105 + 201-589-0110

December 2, 1980

PASSAIC VALLEY SL

COMMIT-al. II

120-2370 Mr. Carmen Della Pia Passaic Valley Sewerage Commission 600 Wilson Avenue Newark, N.J. 07105

Dear Mr. Della Pia:

Following up our telephone discussion of last Monday, be advised that I have retained two technical people - one is an engineer and the other has had over thirty-five years of experience in running a container line for a large plant. The consulting engineer has been with Engineers Incorporated, and in my opinion is extremely qualified. The engineer is Gene Koenig, P.E. and the other gentleman is Mr. George Shaneen. They have been meeting since November 3, 1980 on a part time basis. The analytical work was started since then, so that we know now what to do.

It seems to me from our discussion that the single most important thing you are trying to find out from us is when we will install the automatic waste water collector. I do not believe we need an automatic device because of our unique arrangement.

We started almost fifteen years ago to get ready for what is presently happening, in that we installed an 8" pipeline directly to the sanitary sewer on Raymond Boulevard. We have also made many changes in the manner in which the waste water flows through our system, where we have overflow, wash water, rinse water, meeting at the proper place, emptied into an 80' long settling tank, from there through a screening compartment and then into a 10,000 gallon reservoir in the ground which has two Marlowe sump pumps attached to it. The water is then pumped upward into a 60,000 gallon tank that is 12' in diameter and approximately 60' high. I chose that diameter and height in order to facilitate the settling process. The solution is held in this 60,000 gallon tank until approximately 5:00 a.m. the following morning, at which time a designated employee has been assigned to open an 8" valve to discharge it into the sanitary sewer through the pipe line on Raymond Boulevard. There is a 1/2" valve approximately 12" away from the 8" valve which we put in in order to take samples.

BBAGGC012

BAYONNE BARREL & DRUM COMPANY

Passaic Valley Sewerage Commission December 2, 1980 Page 2

What I intend to do is to attach another valve in that line, and the instructions for the designated employee would be to open the second valve and by adjusting the first valve and locking it we will fill a one gallon container that will take as long to fill as it takes to empty the big holding tank, therefore eliminating the need and expense of an automatic sampling device.

Your inspectors have been here time and again, and I am sure they have noticed the tremendous improvements we have made over the years, and we intend to continue to do so. I have reason to believe that we can and will create a system that will be foolproof, and it will be ready no later than the end of January, 1981.

I sincerely trust this letter satisfies the questions that you raised during our discussion. If not, please do not hesitate to call and I will arrange a meeting with our two engineers and yourself. In the meantime, thank you very much for your patience and understanding.

Very truly yours,

FRANK A. LANGELLA

& Jangella

President

FAL: af Attachment

November 15, 1979

COMPLIANCE SCHEDULE

The following milestones must be included in the compliance schedule to be submitted by industrial users required to install pretreatment facilities or monitoring equipment.

1) Pretreatment

- a) Date retained a consulting engineer or date project assigned, if project is to be handled in house. Include identifying data.
- b) Date preliminary analytical work to be completed. Indentify laboratory.
- c) Date preliminary plans and specifications to be completed.
- d) Date final plans and specifications to be completed.
- e) Date first equipment ordered.
- f) Date construction to be commenced.
- g) Date construction to be completed.
- h) Date startup to be commenced.
- i) Date facility on stream.

If facility is to be constructed in more that one phase a schedule is to be submitted for each phase. If a milestone is missed, or is expected to be missed by more than one month, P.V.S.C. is to be informed of the circumstances and what action is being taken to return to the schedule.

2) Monitoring

- a) Date retained a consulting engineer or date project assigned, if project is to be handled in house. Include identifying data.
- b) Date preliminary analytical work to be completed. Indentify laboratory.
- c) Date final plans and specifications to be completed.
- d) Date first equipment ordered.
- e) Date construction to be completed.
- f) Date facility on stream.

COMPLIANCE SCHEDULE (cont.)

If a milestone is, or is expected to be missed by more than one month, P.V.S.C. is to be informed of the circumstances and what action is being taken to return to the schedule.

INDIVIDUAL DISCHARGE MONITORING REPORT

NAME										-	+							
ADDRESS																		
										_				PERMI	T NUME	BER		
FACILIT	Y LOCAT	ION_			-											10		
											MONITORING PERIOD							
Г	(CU.	FT. X	7.8 =	Gals)						FROM					TO			
	VO	LUME	DISCHA	RGED T	HIS PER		LS.				Ι	DATE	МО	YEAR		DATE	MO	YEA
DATE	#						e,											
30D (mg/1)	0310																	
rss (mg/1)	0530																	
ATE																		
OD (mg/1)	0310																	
rss (mg/1)	0530																	
							•					+						
-												H						
			+				=											
SIGNATUR	RE OF PR	INCIP.	AL ZED AG	ENT		-	TYP	E NAME	AND T	ITLE			TE	LEPHONE	NO.	D	ATE	

PASSAIC VALLEY SEWERAGE COMMISSIONERS SEWER CONNECTION PERMIT

Permit #
(Please use the Permit Number on any correspondence with PVSC)
In compliance with the provisions of the Federal Water Pollution
Control Act, its amendments, the Clean Water Act and the Rules and
Regulations of the Passaic Valley Sewerage Commissioners: BAYONNE BARREL & DRUM CO.
(herein, after referred to as the Permittee) is authorized to discharge from a facility located at
154 RAYMOND BLVD.
NEWARK, N.J. 07105
to the Passaic Valley Sewerage Commissioners Treatment Works in
accordance with discharge limitations, monitoring requirements and
other conditions set forth herein.
Effective Date 7/12/81
Expiration Date 7/12/86

PASSAIC VALLEY SEWERAGE COMMISSIONERS

Chief Engineer

CONDITIONS

A. General Prohibitions

- (1) No person shall discharge or deposit or cause or allow to be discharged or deposited into the treatment works or public sewer any waste which contains the following:
- (A) Explosive Mixtures. Pollutants which create a fire or explosion hazard to the treatment works, collection system or to the operation of the system. Prohibited materials include, but are not limited to, gasoline, kerosine, naphta, benzene, toluene, xylene, ethers, etc.
- (B) Corrosive Wastes. Any waste which will cause corrosion or deterioration of the treatment works. All wastes must have a pH not less than 5 nor more than 9. Prohibited materials include, but are not limited to, acids, sulfides, concentrated chloride or fluoride compounds, etc.
- (C) Solid or Viscous Wastes. Solid or viscous wastes which would cause obstruction to the flow in a sewer, or otherwise interfere with the proper operation of the treatment works. Prohibited materials include, but are not limited to, uncomminuted garbage, bones, hides or fleshings, cinders, sand, stove or marble dust, glass, etc.
- (D) Oils and Grease. (a) Any industrial wastes containing floatable fats, wax, grease or oils. (b) Any industrial wastes containing more than 100 mg/l of emulsified mineral oil or grease.
- (E) <u>Noxious Material</u>. Noxious or malodorous solids, liquids or gases, which, either singly or by interaction with other wastes, are capable of creating a public nuisance or hazard to life, or are or may be sufficient to prevent entry into a sewer for its maintenance and repair.

- (F) Radioactive Wastes. Radioactive wastes or isotopes of such half life or concentration that they do not comply with regulations or orders issued by the appropriate authority having control over their use and which will, or may, cause damage or hazards to the treatment works or personnel operating the system.
- (G) Excessive Discharge Rate. Industrial wastes discharged in a slug of such volume or strength so as to cause a treatment process upset and subsequent loss of treatment efficiency.
- (H) <u>Heat</u>. (a) any discharge in excess of 150°F (65°C)

 (b) Heat in amounts which would inhibit biological activity in the PVSC treatment works resulting in a treatment process upset and subsequent loss of treatment efficiency, but in no case shall heat be introduced into the PVSC treatment works in such quantities that the temperature of the influent waters at the treatment plant exceed 40°C (104°).
- (I) <u>Unpolluted Waters</u>. Any unpolluted water including, but not limited to, cooling water or uncontaminated storm water, which will increase the hydraulic load on the treatment system, except as approved by PVSC.
- (J) <u>Water</u>. Any water added for the purpose of diluting wastes which would otherwise exceed applicable maximum concentration limits.
- (2) No person shall discharge or convey, or permit to be discharged or conveyed, to the treatment works any wastes containing pollutants of such character or quantity that will:
 - (A) Not be susceptible to treatment or interfere with the

process or efficiency of the treatment system.

- (B) Violate pretreatment standards. As pretreatment standards for toxic or other hazardous pollutants are promulgated by USEPA for a given industrial category, all industrial users within that category must immediately conform to the USEPA timetable as well as any numeric limitations imposed by USEPA. In addition, an industrial user shall comply with any more stringent standards as determined by PVSC or other agency.
- (C) Cause the PVSC treatment plant to violate its NPDES permit, applicable receiving water standards, permit regulating sludge which is produced during treatment or any other permit issued to PVSC.

B. INSTALLATION OF SAMPLERS

The permittee shall install - 24 hour composite sampler on outlet acceptable to PVSC with attachments for affixing seals, which shall be maintained in proper working order at all times. The installed samplers shall draw a sample, over each operating day, which shall be representative of plant waste.

A one quart or one liter aliquot shall be set aside by

(9:00 A.M.) each operating day and refrigerated. A

PVSC representative may pick up this sample during the day. Any sample not picked up by PVSC may be discarded at the end of that day.

C. EFFLUENT LIMITATIONS, MONITORING AND COMPLIANCE REQUIREMENTS

During the period beginning (7/12/81) and lasting through (7/12/86)
the permittee is authorized to discharge from outlet(s) number (ed) (20402430-44100-0201)
 Such discharges shall be monitored by the permittee as specified below.

Volume to be determined from Water Consumption Data less 5% credit for evaporation.

FLUENT CHARACTERISTIC	DISCHARGE LI		REQUIREMENTS	
	MAXAXX AMBRAGE	DEMONSMENTS: MEASUREMEN FREQUENCY		REPORTING PERIOD
BOD	* * * * * * *	X X X X X X TWICE/MONTH*	24 Hr. Comp	QUARTERLY
TSS	* * * * * * *	X X X X X X TWICE/MONTH*	24 Hr. Comp.	QUARTERLY
VOLUME	*****	****	x x x x x x	QUARTERLY
	* Sampling has	commenced		
	1	/1		

6 of 13

- 2. In addition to the monitoring required in Section C.1. the Permittee is required to meet the following schedule of compliance:
 - A. Permittee to comply with monitoring requirements contained in interim Mercury Preatreatment regulations which were distributed under a separate cover.
 - B. Within 180 days after promulgation of pretreatment standards it is Permittee's responsibility to submit baseline report to EPA with a copy to PVSC. Reporting requirements listed in 40 CFR 403.12. (Copy Attached)

D. Monitoring and Reporting

Monitoring results obtained during the previous (3) months shall be reported on the designated Discharge Monitoring Report, PVSC Form MR-1 or 2, postmarked no later than the (15th) day of the month following the completed reporting period. The first report is due on (7/15/81). Properly signed reports required herein shall be submitted to PVSC at the following address: Chief Engineer Passaic Valley Sewerage Commissioners 600 Wilson Avenue

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

3. Test Procedures

Newark, New Jersey 07105

Test procedures for the analysis of pollutants shall conform to regulations contained in the PVSC Rules and Regulations, Federal, State and local laws or regulations.

4. Recording of Results

For each measurement of a sample taken pursuant to the requirements of this permit, the permittee shall maintain a record of the following information:

- a) The date exact place and the time of sampling;
- b) The dates the analyses were performed;
- c) The person(s) who performed the analysis;
- d) The analytical techniques or methods used; and
- e) The results of all required analyses.

5. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the locations (s) designated herein more frequently than required by this permit, using the approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Forms, (PVSC Form MR-1 or MR-2). Such increased frequency shall also be indicated.

6. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed, calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of (5) years.

7. Definitions

- a. The "30 day average" discharge means the average of daily values for 30 consecutive monitoring days. For the purpose of enforcement of Pretreatment Standards, consecutive samples taken and analyzed shall be considered as being taken on consecutive days even though one or more non-sampling days intervene. In applying the Pretreatment Standards where more than one but less than 30 samples have been taken and analyzed during any month, a formula, specified by USEPA, will be used to calculate the "30 day average".
- b. The "daily Maximum" discharge means the highest discharge by weight or other appropriate units, as specified herein, during any calendar day.
- c. "Daily" each operating day.
- d. "Weekly" one day each week during a normal operation day.
- e. "Monthly one day each month during a normal operating day.
- f. "Composite a combination of individual samples obtained at regular intervals over the entire discharge day.

The volume of each sample shall be proportional to the discharge flow rate unless specifically modified by PVSC. For a 24 hour continuous discharge, a minimum of 24 individual samples shall be collected at equal intervals and at least once per hour. For continuous discharges of 12 to 24 hours, individual samples shall be taken at equal intervals and at least once per hour. For continuous discharges of less than 12 hours, individual samples shall be taken at least once every 30 minutes. For discharges which are not continuous, individual samples shall be taken such that they will be representative of plant waste.

- g. "Grab" an individual sample collected in less than 15 minutes.
- h. "Quarterly" every three (3) months.
- i. "N/A" not applicable.

E. MANAGEMENT REQUIREMENTS

Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or modification which will result in new, different, or increased discharges of pollutants must be reported by submission of a new PVSC Sewer Connection Application or, if such changes will not violate the effluent limitations specified in this permit, by notices to PVSC of such changes. Following such notices, the permit may be modified to specify and limit any pollutants not previously limited.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall notify PVSC within 24 hours of the occurrence. If this report is made orally, a written report containing the following information, shall be submitted within five (5) working days:

- a. a description of the discharge and the cause of the period of noncompliance;
- b. the period of noncompliance, including exact dates and times, or, if not corrected, the anticipated time the noncompliance is expected to continue, and
- c. the steps being taken to reduce, eliminate and prevent a recurrence of the noncomplying discharge.

Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all pretreatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the PVSC Treatment Works resulting from non-compliance with any pretreatment limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. This condition in no way affects PVSC's right to suspend a permit in order to stop a discharge which presents an imminent or substantial hazard to the public health, safety or

welfare to the local environment or which interferes with the operation of the PVSC Treatment Works.

5. Removed Substances

Solids, sludges, filter backwash or other pollutants or hazardous waste removed in the course of pretreatment or control of waste-waters and/or the treatment of intake waters shall be disposed of in accordance with applicable Federal, State and local laws and regulations. Records documenting such disposal shall be made available to PVSC for review upon request.

F. MANAGEMENT RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the authorized representatives of PVSC, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring methods required in this permit; and to sample any discharge of pollutants.
- 2. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall, in writing, notify the succeeding owner or controller of the existence of this permit, and the need to apply for a new permit, a copy of which shall be forwarded to PVSC.

3. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, or revoked in whole or in part during its terms for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;
- Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

4. Toxic Pollutants

Notwithstanding (Section C), above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition), is established under Section 307 (b) of the Federal Water Pollution Control Act (the Act), its amendments, or any other subsequent law or regulation, for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

5. Civil and Criminal Liability Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

6. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State Law or regulation under authority preserved by Section 510, of the Federal Water Pollution Control Act. (The Act)

7. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

8. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

RCRA GENERATOR INSPECTION FORM

CMPANY NAME:	EPA I.D. NUMBER:		
Bayome Barrel and Drum	N92009871401		
DMPANY ADDRESS:		4 7 4	-
150 Raymond Blid. Newark		مينونين د	-
DMPANY CONTACT OR OFFICIAL:	INSPECTOR'S NAME:		-
Lenge Shancen	Tom Downey -	-	. 0
MITLE:	BRANCH/ORGANIZATION:		
Salu Representative	NPDEN	5	
THECK IF FACILITY IS ALSO A TSD	DATE OF INSPECTION:		COULE .
FACILITY 🔀	1/27/12 YES	110	MON'T
		1.	
(1) Is there reason to believe that the faci	ility has hazardous X		
waste on site?		-	
a. If yes, what leads you to believe it	t is hazardous waste?		
Check appropriate box:		£ .	
Company admits that its waste is haz inspection.	zardous during the	*	X
Company admitted the waste is hazard notification and/or Part A Permit Ag		~	
The waste material is listed in the hazardous waste from a nonspecific s			
// The waste material is listed in the hazardous waste from a specific sour			
// The material or product is listed in discarded commercial chemical product			
ZPA testing has shown characteristic corresivity, reactivity or extracti	on procedure toxicity,	, ,	
or has revealed hazardous constitue analysis report)	nts (please attach		44
// Company is unsure but there is reas materials are hazardous. (Explain)		- 1	
(Explain)	1 × ×		

YES NO K

b. Is there reason to believe that there are hazardous wastes on-site which the company claims are merely products or raw materials?

_ × _

Please explain:

c. Identity the hazardous wastes that are on-site, and estimate-approximate quantities of each.

Incinerator ash 30-40 cubicyards Wastewater sludge 5-10 cubic yard

d. Describe the activities that result in the generation of hazardous waste.

I necessation of usedness from empty drums. Settling of liquid which would from drum cleaning apprentions.

(2) Is hazardous waste stored on site?

 \times – –

- a. What is the longest period that it has been accumulated?
- b. Is the date when drums were placed in storage marked on each drum?

NA --

(3) Has hazardous waste been shipped from this facility since November 19, 1980?

- a. If "yes," approximately how many shipments were made?
- (4) Approximately how many hazardous waste shipments off site have been made since November 19, 1980? 74
 - a. Does it appear from the available information that there is X a manifest copy available for each hazardous waste shipment that has been made?
 - b. If "no" or "don't know," please elaborate.

		YES	NO	FINOW.
4	c. Does each manifest (or a representative sample) have the following information?			
	- a manifest document number	X	-	_
	 the generator's name, mailing address, telephone number, and EPA identification number 	X		- 11
	- the name, and EPA identification number of each transporter.	X	-	===
	 the name, address and EPA identification number of the designated facility and an alternate facility, 			
	if any:	_	X	-
	- a description of the wastes (DOT)	X	·	
	 the total quantity of each hazardous waste by units of weight or volume, and the type and number of con- tainers as loaded into or onto the transport vehicle 	X	4	-
	 a certification that the materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation under regulations of the Department of Transportation and the EPA 	×		
(5)	Were there any hazardous wastes stored on site at the time of the inspection?	×		
	a. If "yes," do they appear properly packaged (if in con- tainers) or, if in tanks, are the tanks secure?	_	X	-
	b. If not properly packaged or in secure tanks, please explain. A 5000 gallon sub surface tank was not storm sewn, line lending to tank was broand was also lenking into itom sewn.	ten in	flori	places
	c. Are containers clearly marked and labelled? NA	* T		-
	c. Do any containers appear to be leaking?	20		_
3	e. If "yes," approximately how many?			

DON'T

Hare of Facility - Layonne Bane and Drum
PCRA 10= - NJD 009 971401
Pate of Insception - 1/21/82

The Control of Inspection: Generator × Transporter TSD /
Hame of EPA/State Inspector
Tom Downey NJDEP

Findings of Inspection:

265.13 - Noverthe wash analysis plan

265.15 - No writte impulia scholule

265.16 - No personal training plan

265.51 - No inspection glan

265.190 - No writter classes plan

265.190 - No writter court of classes estimate

265.390 - Settling task or flowing into stome services

265.376 } cperty loss remains formation into stome should have been lite

Action(s) Taken: 75 DF. Operato was not some of feelity regulations

Action(s) Recommended:

Serie notice of violation for abone

STREAM CONTAMINATION REPORT

5	The Control of the Co	2/1/82		Sventy
District No.:	Report Date	The Control of the Co	Inspector:_	
Company Name:	- 1 AC 12 AC 14 AC			
Address:	DOREMUS AVE.,	NEWARK		
Name and Title of	Person Contacted:	Mr. Langella Pr	esident-Owne	r
relephone No:				
Nature of Business	Recycle harr	els and frums		~
	no Date:_		ime:	Temp.:
olluting - yes	no Nature	of Pollution:		
)ischarge to Storm	Sewer - yes	no NDPES	Permit - y	es no
	:e:			
	Pump failure r	resulted in spil	1 of approx.	1000 gallons
of c austic	material conten	its reached stor	m drain to H	arrison Creek
to the Passa	aic River			
Weather:		Air Te	mp.:	
Color:	Odor:	pH:	Test	Paper
Turbidity:				
ollection on Bank	- Describe:			
urface Scum, Foam	or Oil:			
istance Visible D	Oownstream: Approx	ximately	Ft	
Width acros	s stream: Approx	ximately	Ft	
		1	73	-
LHARRS!				
		ממ	A000016	
		0.0	AUGGOID	

On Thursday, Jan. 28 at 1:15 P.M. a call was received in our office from Terry Ostrander, M.J. DEP Office of Hazardous Substance Control.

Mr. Ostrander requested that someone from PVSC Pollution Control be dispatched to Bayonna Barrel & Drum , Doremus Ave., Newark, to conduct a preliminary investigation in behalf of his agency.

Reports received by the state indicated that a pump failure resulted in a spill at this company. Since an auxiliary pump was not immediately available, operations were to cease. They did not however, and an estimated 1000 gallons of a caustic solution was permitted to reach a yard storm drain to Marrison Creek thence the Passaic River.

Supt. Cupo directed me to conduct this investigation.

I proceeded to Bayonne Barrel & Drum, where I was refused admittance. The receptionist on duty informed me that Mr. A. Purvis, Plant Mgr. was out and that upon his return, he would accompany me on an inspection of the plant.

In the intrim, two agents from the Division of Water Resources also dispatched to this location appeared. They too were refused admission and were in the process of calling State Police for assistance, when company president, Mr. Langella, relented and had a maintenance man escort us to the area in question.

At the time of this inspection there was very little visual evidence that a spill of any type had occurred. Ice and snow saturated with caustic material had already been picked up and deposited into plastic bags and sealed drums for disposal. Both the yard area and storm drain were flushed clean with water. It was therefore not feasible to take a sample.

This company recycles used barrels and drums. Any residue is washed out and the containers repainted. The effluent from this operation is run thru a series of open trenches and pumped into their sanitary line. Due to extreme weather conditions, the pump froze causing the effluent to spill onto the yard area, thence to a storm drain.

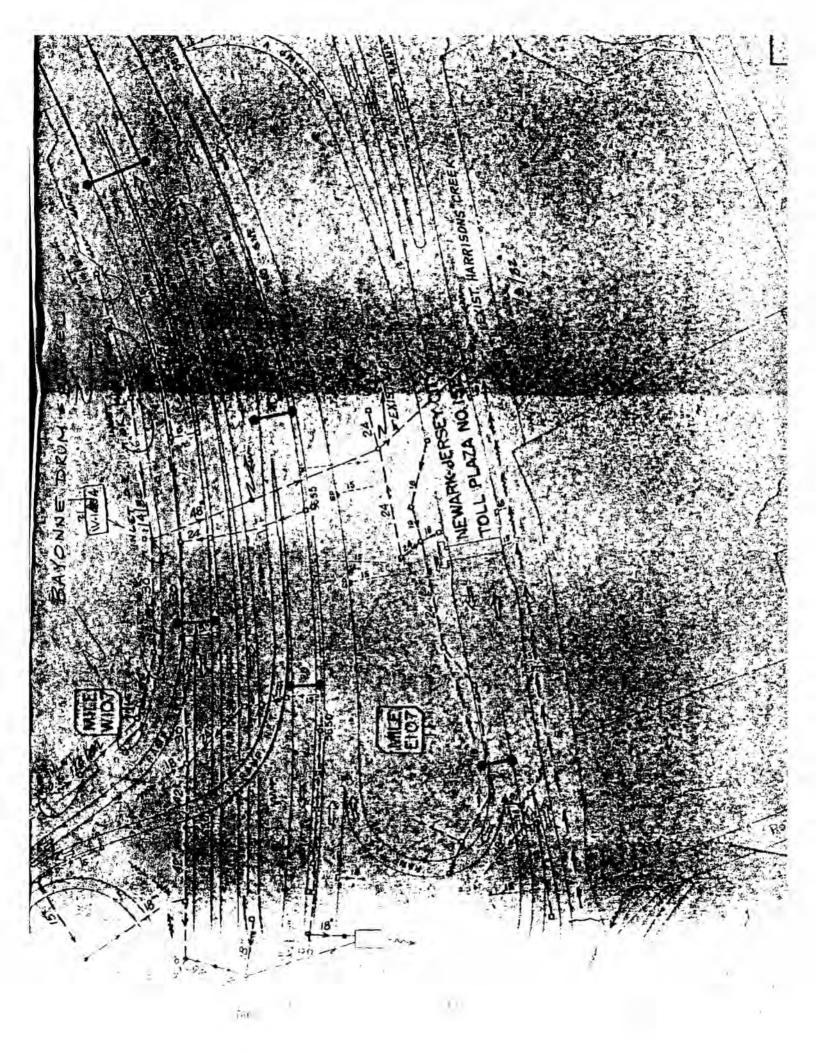
N.J. DEP agents Christopher G. Schiller & John Tomasiello advised me that they would consult with their attorneys to determine what penalty, if any, would be imposed upon this company. They did however direct Mr. Langella to have an auxiliary pump available at all times and in the future, if any further spills were to occur, prompt action is to be taken to contain any material to prevent it from reaching the yard storm drain.

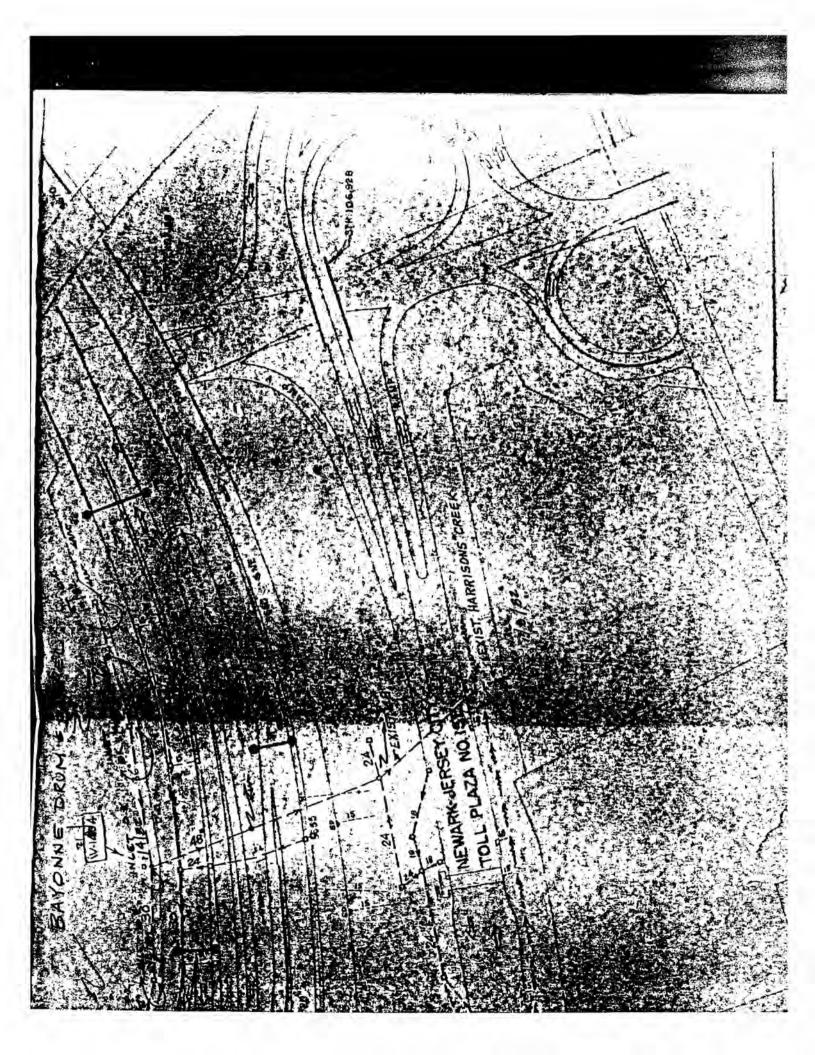
Patricia Sventy River Inspector

COMPLAINT CALL IN REPORT

		IME: WEATHER:	_
ALL RECEIVE	FROM: NAME: 1)	2 DEB	
	TITLE:	Tennic Dation :	
	ADDRESS:		
	04-2		_
	PHONE NO.:		
ATURE OF COM	APTATNT.	our	
	ga ristuloa		-
1/3,	182 - noarhoo	Alexander St.	
1	1	1	
OCATION OF	VIOLATION:		
LOCATION OF	VIOLATION:		
	VIOLATION:		
CALL RECEIVE			
CALL RECEIVE	D & RECORDED BY:	jn · · ·	
얼마나 하시다	D & RECORDED BY:	IME:	

System eleanontion former fuzzen pupe - utilizzen Coustic solution 100 - 1000 - Aure TERRY OSTRAK State div HAZAR dous MRg. 609-292-675 I called 100 mm bi-Mr- y cofusion





Inspector: Tom Downey

Date: 2/22/82

Location: Bayonne Barrel and Drum Co.

St: 154 Raymond Boulevard

Town: Newark

County: Essex

Lot: 3

Block:5002

Origin of Complaint:

Complaint: Investigate housekeeping, disposal practices and possible

illegal incinerator.

Findings:

On 12/2/81, at 1200 hours, I met on-site with Lenny Cerasia, plant foreman for Bayonne Barrel and Drum. I had intended to conduct a RCRA compliance inspection in addition to the investigation, however, George Shaneen, the company official in charge of environmental affairs, was not in.

As we toured the twenty acre site, Mr. Cerasia explained that Bayonne Barrel takes in dirty and damaged drums and cleans and reconditions them. Closed head drums are cleaned using chains and a caustic solution. The spent solution drains into a 5,000 gallon holding/settling tank and is then pumped into a 60,000 gallong holding/settling tank. The liquid is decanted to the sewer under permit by the Passaic Valley Sewage Commission (PVSC). Open head drums are placed on a conveyor belt and moved through an incinerator which burns the residue out of the inside. This residue falls to the ground where it is collected in two subsurface holding/settling tanks. Residue mixes with conveyor belt cooling water. Cooling water drains down through residue and ties into the same settling tank system mentioned above. Accumulated residue or incinerator ash is then shoveled out and placed in a dump trailer. This material is then manifested out for disposal at S & W in Kearny.

I examined manifests and found that 44 of the last 48 shipments went to S & W with the remaining four going to Grows. Bayonne generates about 40,000 lbs of incinerator ash and sludge a month. This amount includes the sludge that settles out in the four referenced tanks. Proper shipping names on manifest were not descriptive enough and it could not be determined which material came from which tank. S & W fills out and supplies manifests for Bayonne. In a conversation a few weeks later with Brad Gradner, Envl. Coordinator for S & W, it was explained that manifests in the future would be more descriptive.

Further investigation outside was done in the drum unloading area. This area was the site of a few minor spills. I checked a few drums to make sure they were empty. Mr. Cerasia explained that employees are instructed not to accept any drums which have more than one inch of residue in them. A drum crusher in this area revealed what appeared to be sludge and residue accumulation underneath.

I concluded my investigation by touring the entire twenty areas of the site. The remaining section of the site was used for empty drum storage. I did not see

any evidence of land disruption which might indicate some thre of disposal on-site.

1/27/82 Investigation

At 10:30 hrs., I returned to Bayonne Barrel and Drum to condut a RCRA compliance inspection. I was accompaned by EPA attorney Jodi Alper. During the inspection it was noted that the 5,000 gallon tank was overflowing to a storm sewer. According to George Shaneen, company representative, pumps and lines from 5,000 gallon tank to 60,000 gallon holding tank were frozen, thus liquid was backing up in settling tank Besides overflow from the settling tank there were two breaks in the line leading into the settling tank (see map). Liquid from these breaks was flowing across pavement and into storm sewer. There was no means to stop flow into the 5,000 gallon tank with the exception of halting production. (Only the incinerator operation was working.) Samples TD063 from the 5,000 tank, TD064, from break in line nearest the 5,000 gallon tank, TD065, break in line near boiler building and TD066 from flow of liquid entering storm sere, were taken. Phots 1-8 taken of flow and source.

We then met with the owner, Frank Langello and discussed the situation. Mr. Langello was not all that cooperative. He had no intention of stopping production to halt flow. He stated that flow would cease when production stopped at 1730 hours. He did instruct an employee to start charcoal fires in buckets in pump house and under frozen lines and to keep them burning all night. He was not sure if sewer in question led to PVSC or river. (I contacted Tom Mack of PVCS but he could not tell either.) Mr. Langello said that he would attempt to free pumps and lines early the next day but he still intended to operate production whether lines were free or not. Mr. Langello said that discharge had been going on for the past 2-3 days, however, an unidentified employee stated that discharge had been going on for two weeks. Discharge to sewer was estimated at 5-10 gallons per minute.

At 1530 hours, I notified the Division of Hazardou Management (DHM) and spoke with Tony Catanese and again at 1700 hours and spoke with Joe Goliszewski. It was agreed that I would stay on-site and monitor flow until it decreased. DHM would then send someone to the site first thing Thursday morning, 1/28/82. Jody Alper suggested that the EPA Emergency Response unit be notified, however, I assured her that the DEP could handle it.

At 1945 hours I noted that flow had decreased to about 2-4 gallons per minute. No flow was noted from settling tank or break nearest tank. Flow from break near boiler building now appeared to be clearer than before. At 2000 hours, I left the site.

The next morning at 0900 hours, I contacted Joe Goliszwski. Mr. Goliszwski told me that Chris Schiller of Division of Water Resources (DWR) had been notified the previous evening and that they would respond this morning. I then contacted Mr. Schiller's office and left a message for him to contact me. One hour later, I called again and spoke with Mr. Schiller who informed me that his office was not responding since DHM was handling the case. I explained that they were not handling the case and he told me he would look into this mix up. A short time later, I received a call from Jodi Alper who informed me that she had spoke with Mr. Schiller and DWR would respond. I understand that they had someone on-site about 1330 hours that day. Had I known the previous evening that no one from the DEP was going to respond until the next afternoon I would have gone back up myself the following morning.

In a conversation earlier that day with Newark City Engineer Robert Bienz, I was told that the storm sewer in question flows from Bayonne Barrel and Drum property under the NJ Turnpike and into Harrison Creek which inturn flows into the Passaic River.

Housekeeping on-site was generally poor, especially around the incinerator area, drum crusher and settling tanks. Most of the site was covered with snow during my second inspection but I did notice a few areas of what appeared to be soil contamination.

cc: Jody Alper, EPA Tony Catanese, DHM Chris Schiller, DWR

thomas Drawn

RAYMOND BLVD. FLOODING NEWARK

At approximately 2:00 P.M., 3/24/82, I received a call from F. Belli reporting an incident of flooding on Raymond Blvd., underneath the N.J. Turnpike. I went out to investigate, and found that there was a flooded area on the westbound lane of Raymond Blvd. under the N.J. Turnpike. A check of the liquid with pH paper showed a pH of over 11.

I met with J. Lawrence at the site and determined that the sewer was a City of Newark sewer. J. Lawrence said he would notify R. Benz of the City of Newark Engineering Department about the problem. Since this area is very close to Bayonne Barrel and Drum Co., I visited with the company. I visited with F. Langella who came with me to the flooded site. On the dividing island at Raymond Blvd., I lifted the manhole cover to Bayonne Barrel's industrial sewer line. A pH check was over 11. Mr Langella asked for a chance to look over his operation and was told we would follow up the next day. J. Lawrence later told me that he had spoken to R. Benz about this problem and had advised him about the potential hazard.

Mario Graglia, 3/25/82

MG:dv

NOTE: A check of Raymond Blvd. the next day showed that the flooding had gone down.

BBAG08019

MAZARDOUS WASTE INVESTIGATION

HW/EF 07-58

Inspector: Tom Downey

Date: 5/17/82

Location: Bayonne Barrel and Drum Co.

St: 154 Raymond Boulevard Property owner:

Town: Newark

County: Essex

Lot: 3

Block: 5002

Origin of Complaint:

Complaint: Investigate waste pile on site and follow-up of 1/27/82

investigation

Findings:

On 3/3/82 at about 1400 hrs., DEP employee Jeff Kane and myself arrived on site at Bayonne Barrel and Drum to investigate a possible waste pile on site. We toured the site accompanied by plant manager Alex Purvis.

Tour of site

The area around the 5000 gallon below ground settling basin was inspected. Broken line leading into this tank, noted in 1/27/82 investigation had been repaired. All pumps (for below gound tank to 60,000 gal. holding tank) appeared to be operating properly. Some soil in this area, adjacent to pump house appeared contaminated. This was brought to plant manager's attention.

We next inspected the area adjacent to the incinerator. Housekeeping in this area was very poor. It appeared that incinerator ash mixed with cooling water had overflowed the subsurface holding tanks which are on each side of incinerator. Extensiv soil contamination, 30' x 65' and 30' x 40', was noted in this area.

We then proceeded into the southern section of the plant where the empty drums were stored. In the southwest section of the plant, a pile of sludge-like waste was noted (about 2' x 35' x 40'). According to Mr. Purvis, this was incinerator ash which had been accumulating for the last two weeks. An irregular x 150' patch of leachate or runoff residue was noted leading down grade from pile.

From here, we went to the incoming drum off loading area where I opened a few empty drums. In this area, I found three partly full drums (1/2 - 3/4 full) of what appeared to be gray paint. A few others appeared to contain water.

Meeting with Langello

We then went inside where I discussed our findings with the owner, Frank Langello. We first discussed the waste pile. Mr. Langello explained that material was incinerator ash which had been, up until two weeks ago, disposed of by S & W of Kearny. However, since Langello owed S & W \$15,000.00, they refused to haul anymore off site until they were paid. Mr. Langello (who had claimed financial troubles last inspection) claimed that he did not have the money to pay S & W at the time. After some discussion, it was suggested that Langello try and ship waste direct to disposal site (GROWS in PA) and eliminate middleman. This was taken into consideration. We discussed a time schedule for removal of waste pile and it was decided that pile would be covered with plastic and be removed

within two weeks. There was no plastic liner under pile.

In regard to the part filled drums of paint, Langello claimed that it was drainings from other empty drums shipped in. We also discussed housekeeping around the incinerator and the various areas of contaminated soil. Langello explained that he was in the process of selling business and that new owners had intentions of changing process for incinerator which should eliminate the mess. He claimed he would clean area and contaminated soil. Before leaving, I informed Mr. Langello that I would return in two weeks to check on his progress on removing waste pile. We left site at about 1700 hours.

Home to Down

Samples and photos

Samples taken:

TD074 - composite of sludge (waste) pile

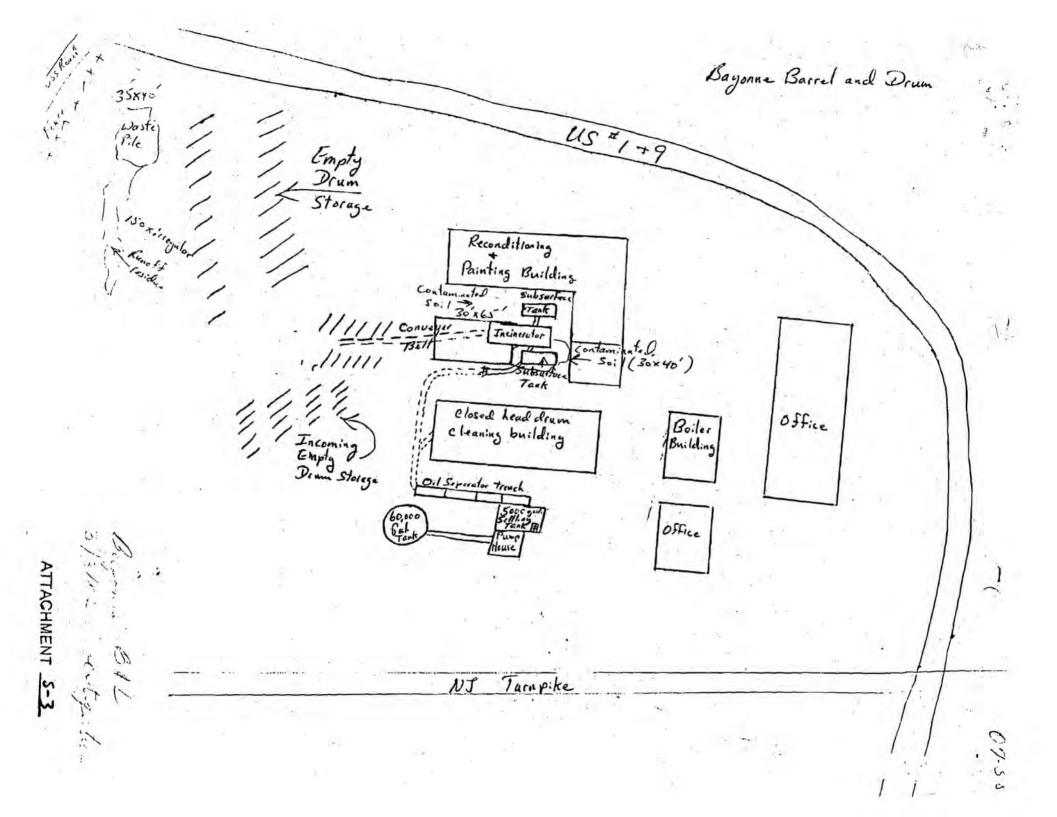
TD075 - composite of residue from leachate runoff

TD076 - paint drum

TD077 - paint drum

22 photographs taken.

cc: Jodi Alper, EPA
Tony Catanese, DHM
Chris Schiller, DWR



STREAM CONTAMINATION REPORT

District No.: 5 Report Date: 3/1/83 Inspector: Fiore/Cole
Company Name: BAYONNE BARREL & DRUM CO.
Address: Rt 1 Raymond Blvd. Newark
Name and Title of Person Contacted: Sal DeChiara, Maint. Supt.
Telephone No: 589-0110
Nature of Business: Barrel & Drum
Sampled - yes no Date: Time: Temp.:
Polluting - yes X no Nature of Pollution: sanitary overflow
Discharge to Storm Sewer - yes no NDPES Permit - yes no
Violation: Date: 2/28/83 Time: Description:
Separator stopped overflow entered catch basin
Weather:Air Temp.:
Color: Odor: pH: Test Paper
Turbidity:
Collection on Bank - Describe:
Surface Scum, Foam or Oil:
Distance Visible Downstream: Approximately Ft.
Width across stream: Approximately Ft.
REMARKS: Material entered Harrise Ditch thru catch basin, most
of material contained and cleaned up
BBAGG0024

On 2/28/83 Sal DeChiara (Maint Supt.) stopped our car, and informed as that, they (Bayonne Barrel) had an overflow, and some material got away.

We investigated and found electric problem stopped pump and overflow from sanitary separator entered catch basin, which flows into Harrison Ditch.

Sand was put down to contain most on property.

WY

We checked Harrison Ditch and iridescence from oil was visible, but this condition has been like this at low tide, since the big oil spill, which the Coast Guard had cleaned up.

On 3/1/83 we checked and found Harrison Ditch in a normal condition. This pollution is eliminated.

Respectfully submitted, Bill Fiore Joe Colello River Inspectors

joe (Keers

May 11, 1984
Bayonne Barrel
154 Raymond Blvd.
Newark
Frank Langella

Mr. Langella said, except for sanitary, no water has been used since September 1983 when they stopped operating. Since then they have been selling off equipment and inventory. Their plans include the sale of their property.

85% of the machinery is sold. 75% of the fleet is sold. 25,000 reconditioned drums are left.

They are selling the used drums to other corporation as:

Kingsland
Bessener
Central-(Doremus Ave. near Wilson)
Sussex-Belleville
New Woodbridge (Frelinghuysen)

They can not sell the property until all the drums are gone according to the D.E.P. and D.O.T. hazardous waste regulations.

I feel the neutralization tanks and outlet should be sealed off if not in use.

Gunster

6

STREAM CONTAMINATION REPORT

District No.: 5 Re	port Date: _5-/	1-64-Inspect	or: F10.	ce.	
Company Name: BA	IDANE BR	reel a	DRUM		
Address: Rf.	1	,			
Name and Title of Person C	ontacted:	Mr. LANG	11A FR	es. Du	wer
Telephone No.: 58		/		- 100	
Nature of Business:	Reayale	BREREI	5		
Sampled - yes no					
Polluting yes no	Nature of Pol	lution:	Red D	ye Non	Toxic
Discharge to Storm Sewer -	yes no	NDPES Permi	it - yes	_ no	
Violation: Date:					
Weather: Clear Color: Red					aper
Turbidity: Ked Collection on Bank - Descr	ibe:				
Surface Scum, Foam or Oil:					
Distance Visible Downstrea	m: Approximatel	Ly	F	t.	
Width across strea	m: Approximatel	Ly	T	t.	
REMARKS: Compians	, Close	d, 607	+ worke	es cle	ANING
VARd, spille	1 Red Z	DYE, DO	wder A	Nd RA	in
wash it o	lown to	HAR	EISON (reck	

ON. 5-10-84 Recieved Call and Complaint South of International Harvester Plant, located ON DOREMUS fue, NewARK which also Colled about hed in HAPRISON Creek. At 10:05pm 5-10-84 took sample and investigated. I found source coming from Bryonne Brane I, which is alosed down garations MR FRANK Langella ARRIVED while I was At GAte, we investigated to-gether and Sound, that men aleaning & turning barrels had fulled a bag of Red Dye from one barrel that ripped. The Red Dye was in powder form. The men didn't pick or sweet it up and The RAINS washed it down antch basin to HARRISIN Creek. This WAS UNKNOWN to WERKEN. MR. Langella order diet brancier and shord up a nud cleaned up, and gut in decime for Aminal up and cleaned up, and gut ion eliminated by 5+ W. waste. Co. This pollution eliminated Respectfully Bill Fiere River Inspector

COMPLAINT CALL IN REPORT

DATE: 5/9/84 TIME: WEATHER:	
CALL RECEIVED FROM: NAME: International Harvester	
TITLE: DOTEMUS AU	
ADDRESS:	
PHONE NO.:	
NATURE OF COMPLAINT: Creek behind property is bright	st red
LOCATION OF VIOLATION:	-
CALL RECEIVED & RECORDED BY: Mario braglia	
REPORT REFERRED TO: F. Cup - Bill Fiore	
DATE:TIME:	
BY:	

COMPLAINT CALL IN REPORT

TE: 5/10/84 TIME: WEATHER:	
CALL RECEIVED FROM: NAME: Sheldon Licke	
TITLE: Red color in creek couth of	
ADDRESS: International Harriestor par- luce	1
on Doremus Air	
PHONE NO.:	
NATURE OF COMPLAINT:	
LOCATION OF VIOLATION:	
CALL RECEIVED & RECORDED BY: F.D'ASCROSIO	
REPORT REFERRED TO: F-Copo - B Fice	
DATE: 5/10/84 TIME:	
BY:	

Frank

Shelden Typhie called me just before 9 AM today and advised me that he had observed a red who in the creek just south of the old International Howester short horated in Poremus and, newark. He noticed this at about 6:15 Am. I called Jine Maintenance and asked them to pass it along to you.

300

Results of Preliminary Investigations and Sampling in Proposed New Jersey Turnpike Right-of-Way at the Bayonne Barrel and Drum Property

Newark, New Jersey

Submitted to:

New Jersey Turnpike Authority

P.O. Box 1121

New Brunswick, New Jersey

Submitted by:

Louis Berger & Associates, Inc.

100 Halsted Street

East Orange, New Jersey

December 1986

ATTACHMENT C-1

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2.0 SITE DESCRIPTION

Bayonne Barrel and Drum (BB&D) is located at 150 Raymond Boulevard in Newark, New Jersey. The property is bounded by Routes 1 and 9 on the west and north, the New Jersey Turnpike on the east, and the constuction site, previously the Newark Drive-In Movie Theater, on the south (see General Site Map, Figure 1). The site consists of three tracts designated 1, 2, and 3 which correspond to the land ownership as indicated by the City of Newark. Tract 1 is approximately 11 acres and encompasses the buildings, operations, storage areas, a shredded tire pile and the proposed right-of-way. Tract 2, located in the southeast part of the site, is 5 acres. It contains empty drums, an ash pile and other refuse. Tract 3, owned by the Turnpike Authority and adjacent to the Turnpike right-of-way, is 1.4 acres. It is partly covered by a pile of shredded tires.

2.1 Site Characteristics

The BB&D site is characterized by its location in an old flood-plain of the Passaic River. Topographically, the site is relatively flat with a slight undulating slope towards the east and northeast. Elevations on the property range from approximately 10 to 15 feet above sea level. Drainage follows the topography and empties into drains that traverse the eastern border of the site near the Turnpike's fence. The stormwater sewer system drains into the Passaic River. There is no natural surface water on the site.

The site currently contains a number of buildings which were utilized for drum reconditioning, an incinerator, above ground and underground storage tanks, shredded tire piles and a large empty drum storage area (Figure 1).

2.2 Current Owner/Operator

Tract 1 is owned and operated by Bayonne Barrel and Drum Company, Inc. The five acre Tract 2 is owned by the BB&D's principal owner Frank Langella, but is utilized as part of the BB&D facility. The Bayonne Barrel and Drum Company, Inc. filed a petition under Chapter 11 of the Bankruptcy Code (11 U.S.C. 101, et seq.) on July 13, 1982. The 1.4 acre Tract 3, is owned by the NJTA.

2.3 Status of the Property

Bayonne Barrel and Drum Company was a reconditioner of storage drums. Since it filed for protection under the bankruptcy acts, a portion of the property has been leased and is used to repair and maintain trailers and cargo containers. Currently, the New Jersey Tire Pyrolysis System Company is seeking financial assistance from the Essex County Improvement Authority for the purpose of financing the acquisition of the land and existing buildings at BB&D. This company plans to operate a tire pyrolysis system to produce saleable products.

The previous site activities included the cleaning and reconditioning of drums using caustic solutions and incineration. These operations produced large amounts of spent solution, incinerator ash and sludge. The storage of these waste products, as well as the storage of the drums awaiting reconditioning, provide the potential for hazardous waste contamination.

ATTACHMENT C-C

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As the operator of the site did not have a permit required under the authority of the Resource Conservation and Responsibility Act (RCRA) to operate a hazardous waste storage facility, a consent order was issued by the USEPA (Docket No. II RCRA-82-0115) charging BB&D with violating Sections 3004 and 3005 of the Act (see Appendix A). The consent agreement accompanying the consent order required Bayonne Barrel and Drum to take the following actions:

- 1. Submit a detailed soil and aqueous sampling plan.
- 2. Remove all hazardous waste piles and contaminated soil.
- Submit a groundwater monitoring plan to determine if contamination of groundwater occurred and the extent and direction of movement of any contaminated plume.
- Submit a closure plan that satisfies the requirements of RCRA under 40 CFR 265.112, 40 CFR 265.197 and 40 CFR 265.351.

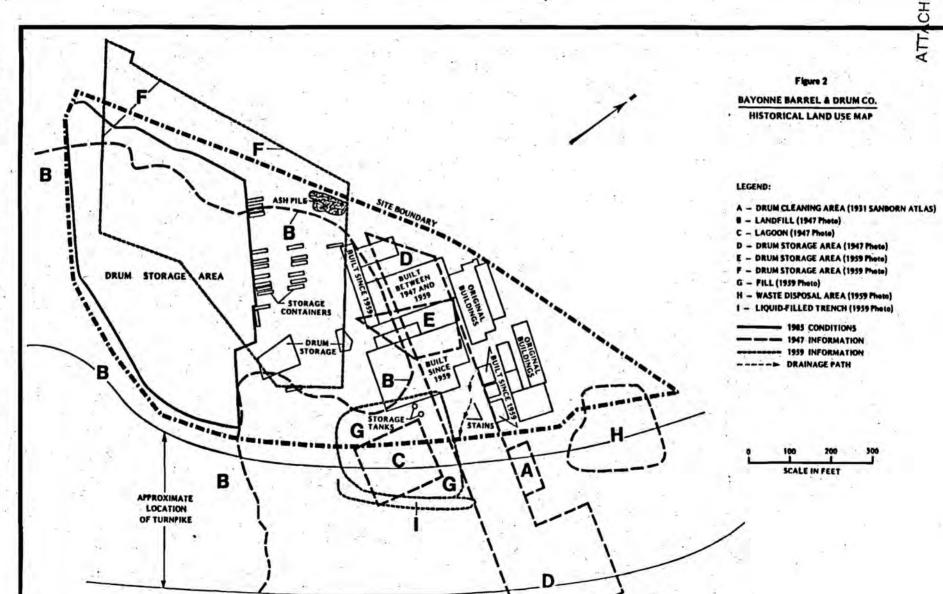
After the consent order was issued, BB&D hired Dan Raviv Associates, Inc. to conduct a soil and groundwater monitoring program. The original sampling plan that Dan Raviv & Associates proposed in October, 1984 was later modified to reflect comments by USEPA and NJDEP. The modifications were agreed to in an exchange of letters during the summer of 1985. Though this program has been initiated, the extent to which it has been implemented and any results that were obtained has not been made known. Although the site is being monitored by the USEPA Region II, no actions are known to have been taken to proceed with any site cleanup.

Other than the consent order and agreement, no other violations, permits or enforcement actions are known to be in effect or pending.

2.4 Historical Use

The area encompassed by the BB&D property is believed to have been part of the tidal marshes associated with the lower reaches of the Passaic River. At some time the area appears to have been covered with fill. It is not clear to what extent this fill was dumped as waste, and what was placed there for construction purposes. Historical maps and air photos indicate that parts of the area now occupied by the Bayonne Barrel and Drum company have been used for drum storage/reconditioning since at least 1931. Additionally, substantial portions of the site have also been utilized for waste disposal.

The earliest reference to a drum recycling facility at the site is a 1931 Sanborn Atlas of Newark which shows an industrial facility operating at a site owned by the B & F Co., Inc. However, the buildings are labelled "tenant occupied". Most buildings are shown to be storage buildings. Crate and drum storages are located east of the original site buildings, outside the current site boundaries. Two of the smaller buildings are labeled as "drum cleaning" areas (Figure 2, Area A). The 1939 Newark Directory lists the Bayonne Steel Drum company with James Allen as President. The 1942



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Newark Directory shows the same company with Frank Langella (the current owner) and David Pacrulli as owners. A 1943 Newark Directory indicates that the establishment's name was changed to its current name of Bayonne Barrel and Drum Company, but the owners are still listed as Mr. Langella and Mr. Pacrulli.

Aerial photographs from 1947 to 1985 document physical changes at the site. Figure 2 graphicly displays these changes. Following is a chronologic narrative of the significant changes that have impacted the site's present environmental setting.

- Aerial photographs taken on April 28, 1947 show that purtions of an adjacent landfill covered the southern two thirds of the current site area (B). A short road provided access between the drum storage facility and the landfill. One waste lagoon (C) was observed at the site in a location which straddles the current eastern site boundary. Drainage channels connected the lagoon to drainage channels leading southeast to the Passaic River. A large open storage area (D) was located south of the site buildings. Several thousand drums were stored in this area and ground stains were seen surrounding the drum stacks. A substantial portion of areas C and D are now overlain by the Turnpike.
- The construction of the New Jersey Turnpike (Interstate 95) altered the pattern of drum storage at the site. Photographs taken on April 15, 1959 show that drum storage E had been moved to the site's southwest corner extending slightly beyond the current site boundary. A new building has been constructed and a small concentration of drums (F) was noted east of that building. The lagoon (C) previously seen along the site boundary has apparently been filled in (G). Additionally, a small waste disposal area (H) was located in the northeast corner of the site. Drainage ditches at the eastern edge of the site apparently drained into a liquid-filled trench (I) adjacent to the old lagoon location.
- Recent photographs (July 3, 1985) show that the areal extent of open drums has decreased only slightly from that used in 1959. Six new buildings were noted in the site's northern area, and several storage containers (possibly truck trailers) were observed north of the drum storage area. An area of dark staining, indicating a recent spill, was seen at the eastern edge of the site. Ground stains were also observed in the drum storage area. A large mound of dark material (possibly ash) was seen at the western edge of the site. Waste disposal previously seen in the northeast corner of the site (1959) was no longer evident.

PHOTO SOURCES:

April 28, 1947 - Black and white aerial photographs at an approximate scale of 1"=1000' from Robinson Aerial Surveys, Inc., Newton, NJ.

April 16, 1959 - Black and white aerial photographs at an approximate scale of 1"=1500' from Robinson Aerial Surveys, Inc., Newton, NJ.

July 3, 1985 - Black and white aerial photograph at an approximate scale of 1"=1000' from HNTB engineering plans for 1990 NJ Turnpike widening.

A Foxboro Century Crganic Vapor Analyzer (OVA), with a flame ionization detector, was also used as a screening device for the measurement of organic vapors during well development. During the drilling of monitoring well #2, OVA readings reached 400 deflection units.

3.1.2 Personnel Protection Equipment

The determination of protection levels was made by the Site Safety Officer. The information that aided in making the decision was the air quality measurements, the type of work being performed and the visual evidence of known and suspected hazards.

Based on PID measurements in ambient air, field personnel were suited to Level D protection. During the drilling of monitoring well #2, the field personnel suited up to Level C. This required the use of a half-face respirator with a particulate filter.

3.1.3 Decontamination Procedures

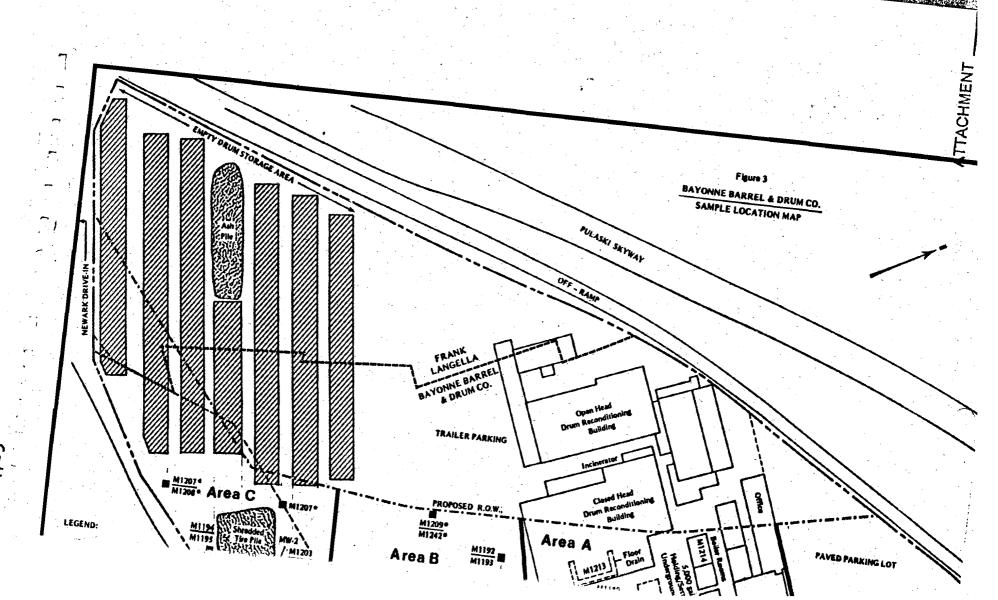
When leaving a site all personnel were required to decontaminate themselves and dispose of all nonreusable equipment. Boots were scrubbed clean on site with soapy water and dried. Tyvek suits and gloves, and air cartridges and filters were disposed of in trash bags. Exposed skin was washed with soap and water. All wash water was disposed of on-site.

3.2 Sampling Plan

For the reconnaissance-level investigation conducted, sampling of soils and of groundwater was planned. The sampling locations for both soils and groundwater are shown on Figure 3. The soil sampling sites are designated by a five character alpha numeric code. The groundwater monitoring wells are identified as MW2 and MW3. Well MW1 occurs on the adjacent drive-in movie property which is not addressed in this report. The rationale for sample locations and the methodology employed for soil sampling and for groundwater sampling are discussed in the following sections as well as the physical description of the material encountered during sampling.

3.2.1 Soils

The determination of the soil sampling points was based on both random and biased sampling. Random sampling methodology was employed for all the discrete samples that were taken and the composite sample locations were chosen by biased sampling. The random sampling methodology was performed by dividing the area at BB&D that is within the Turnpike's proposed right-of-way into a grid of 30 blocks, assigning numbers to each block, and then statistically selecting blocks for sampling point location by using a table of computer generated random numbers. When the number of matching numbers equalled the predetermined number of samples to be taken, the process was stopped. For the purpose of preparing the sampling plan no division was made between property currently owned by NJTA and that owned by Bayonne Barrel & Drum. The area within the fenceline is being operated as a single entity irrespective of property lines and the purpose of the investigation was to determine the level of contamination in the construction area.



The biased sample locations were selected due to site specific criteria: drainage, previous land use, and location of random samples. Nearly all surface and subsurface runoff within the proposed right-of-way flows to the storm sewer that transects the eastern border of the site. Therefore, any leachate emanating from the drums or ash pile as well as contaminants leaking from the surface and subsurface storage tanks in the northeast part of the site were intercepted by the soil borings.

The number of samples to be taken was based on a field investigation of the site, historical land use, and USEPA's investigations. Because the purpose of the site reconnaissance investigation was to determine whether the site is contaminated or not, and if so by what, it was decided to take 5 discrete samples at two different depths, 0-18 and 18-36 inches below land surface, for a total of 10 discrete samples. Two composite samples, comprised of three (3) different sample locations each at two distinct depths, were collected for a total of four composite samples. Due to local conditions, there were six discrete 0-18 inch samples taken and only four 18-36 inch samples. Of the four composite samples, one of the two 18-36 inch samples was comprised of only two samples.

Sediment samples, comprised of sediment collected from the floors, floor drains and scrapings off the walls of the buildings, were taken from locations inside the closed drum reconditioning building and in the boiler room. Each building sample was composed of five separate samples.

Discrete or grab samples are retrieved at a single point. Composite samples are samples comprised of two or more discrete samples taken at several different horizontal or vertical locations. The composites at BB&D were taken at three different horizontal locations and composited in the laboratory where the analyses were performed.

Compositing is performed during site reconnaissance when the nature and the extent of the contamination is unknown. It allows for determining the general areal extent of contamination and the nature of the contamination without requiring extensive sampling. The disadvantages are that the compositing may reduce contaminant levels to safe levels. By diluting a contaminated sample with two relatively clean samples the source of contamination is unknown. Another disadvantage is that volatile chemicals in a sample are lost during the compositing process. Compositing is never used when point specific chemical data is needed. Therefore, by discriminately using both discrete and composite samples, the general areal nature and extent of the contamination was able to be assessed. The vertical sampling at 0-18 and 18-36 inches below ground surface was intended to demonstrate whether only the surface material was contaminated, or if vertical migration of contaminants had occurred.

The actual number of composite samples was greatly reduced with respect to the sampling plan originally proposed. Discussions with NJDEP officials indicated a strong reluctance to accept results from composite samples due to the problems stated above. The sampling method adopted presented the best compromise between obtaining a sufficiently wide coverage of the area while having a reasonable number of discrete samples to support our findings to NJDEP.

Discrete soil samples were also taken during installation of the monitoring wells at depths above and below the water table. It was decided to limit the number of samples analyzed to six from both the Bayonne Barrel & Drum and the Newark Drive-In Movie Site. Therefore, 24 inch samples were taken every five feet and examined. Based on this, the following four samples were analyzed and the remainder discarded. At monitoring well #3 only one sample was analyzed, from 0-18" below land surface (b.l.s.), because of the poor recovery below the water table. For monitoring well #2, three discrete samples were analyzed, one above the water table and two below the water table. The depths were 3-5 feet, 13-15 feet and 17 1/2-19 1/2 feet b.l.s., respectively. The boring logs for the monitoring well are presented in the Groundwater section.

3.2.1.1 Sampling methods

A split spoon was used to retrieve all soil samples, including those in the monitoring well boreholes. It is composed of carbide steel, and is 24 inches long with a 2-inch outer diameter. The method for collecting samples using the split spoon is as follows:

- a. Assemble the sampler by aligning both sides of the barrel and then screwing on the bit on the bottom and the heavier head piece on top.
- b. Place the sampler in a perpendicular position on the material to be sampled.
- c. Drive the sampler utilizing a sledge hammer (140 lb. weight with a 30" drop when using the well rig for sampling in the boreholes).
- d. Record the length of the tube that penetrated the material (also the number of blows needed to reach that depth when using the well rig).
- e. Withdraw the sampler, and open it by unscrewing the bit and the head piece and then splitting the barrel.
- Record the physical description of the material and place it into the appropriate sample containers.
- g. Decontaminate sampler using procedures outlined in Appendix C. In some locations where the split spoon sampler could not penetrate the material, a motor driven auger was used to break up the material, and the sample was taken using dedicated plastic scoops. This normally occurred at the surface where compaction of the material was most severe.

A description of materials encountered at each sample site are shown in Table 1.

3.2.1.2 Sample containers

Soil samples were taken from the sampler and placed in containers that have been determined by the USEPA to be adequate for the types of analyses the

Table 1
SOIL BORING DESCRIPTIONS

A. Discrete Soil Samples

Boring #	Depth (Inches)	Soil Description
M1188	0-8	Black muck, some gravel; oily odor
M1189	0-18	Brown silt and gravel
M1190	2- 8 8-13 13-18	Dark brown silty sand; friable Dense silty sand, trace glass Dark black sandy silt, some fill (plastic, china, whitish silica based material)
M1191	18-24 24-30 30-36	Brownish, black silty sand; some fill (asphalt glass, plastic, waste concretions) Same with trace plastic Fill (slag, glass, iron/sand concretions); distinct petroleum odor.
M1192 M1193	0-18 18-24 24-36	Dense black sand and fill (plastic, brick, slag) Black silt; some fill (brick, glass, cardboard) Same with asphalt and wood; moist
M1194	0-7 7-12 12-17 17-18	Gravelly, f-m sand, trace glass F-m brown sand C gravel and c-m white sand; moist Orange-brown silty clay; trace organic smears
M1195	18-26 26-29 29-33	F-m brown silty sand Same, trace asphalt-like material Fill (greyish-black asphalt-like material and coarse fragments with trace black smears) Dense sand and gravel; some conglomerate, moist
M1196	0-7 7-14	Brownish black silty sand, some gravel, little asphalt Same with some asphalt
M1197	14-18 18-25 25-31	Reddish brown silt and fill (brick conglomerate, trace asphalt) Black sandy clay and fill (asphalt, brick) Fill (brick, coarse fragments (>1.5"), concretions, trace plastic)
	31-36	Brownish black silt, little black smears and weathered brick. Distinct petroleum odor.

Table 1 (continued)

Boring #	Depth (Inches)	Soil Description
B. Composi	ted Soil Sam	
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M1207	D-4	Dark brown cilty rand come clatey coarse
(6A)	0-4	Dark brown silty sand, some slatey coarse fragments, trace asphalt-like material
(Un)	4-8	Same, but more orange-colored sand with little
	7.5	coarse fragments and trace glass.
	8-14	Same, some whitish sand with little black
		streaks, trace glass
	14-18	C white sand and m-c brown sand, trace black
		smears, little cemented, rusted fill; moist
M1208	18-24	Gravelly m-c brown sand
	24-30 30-36	C white sand, some orange brands & trace pebbles
	30-30	Same, some coarse fragments, trace black streak
M1207	0-4	Greyish brown silty sand, trace orange-green
(6B)		streaks
7.7.5	4-10	Same, black with some fill (glass and wood)
	10-18	Fill (Asphalt-like matrix, some white specks and
		orange material, trace wood and glass)
No 18-36 in	ch sample ta	aken for composite M1208 at 6B.
M1207	0-8	Brownish, black silty sand, some coarse frags.
(6C)	8-15	Same, some broken brick and asphalt-like
,		material. Slight petroleum odor.
	15-18	Orange, brown silty sand and gleyed silty sand,
	7.3	trace brick and black streaks.
M1208	18-24	Black sandy loam; distinct oily texture and odor
	24-30	Dense sandy loam, some fill (brick, plastic):
	52.125	distinct petroleum odor.
-	30-33	Sandy loam and fill (glass, wood, asphalt-like
	22.26	material, paint streaks); distinct oily odor
	33-36	Same, little plastic, some wood, Edistinct odor
1209	0-6	Sandy loam; little orange streaks, brick; weak
(7A)		petroleum odor.
21 100	6-12	Dense sandy loam, trace white flakes & black
		laminates; strong petroleum odor.
	12-18	Fill (asphalt-like material, white flakes, green
	251257	and red streaks, glass, sand concretions).
M1242	18-22	Black sand, some pebbles and fill (asphalt-like
	20 20	material, plastic, glass)
	22-30	Fill (glass, pebbles, wood fibers, green marl,
	30-36	brick Same, little dense red clay, petroleum-saturated
	30-30	Jame, Trevie dense red cray, perioreum-saturated

Table 1 (continued)

7 × 1	Depth	
oring #	(Inches)	Soil Description
1209	0-4	Black sandy loam, trace small pebbles; friable
7B)	4-8	Same, some fill (Slag, brick and glass)
	8-14	Same, little rainbow colored bands; moist
rt film û	14-18	Fill (asphalt-like material); trace oily odor.
11242	18-24	Fill (same, but little wood); slight oily odor
	24-30	Fill (asphalt-like material, white coatings, spongy material, sand and other)
	30-36	Same, all black trace-white coatings. Weak oily odor.
11209	0-10	Black sandy silt and m-c gravel
7C)	10-14	Fill (asphalt-like substrate, trace slag)
	14-18	Same, little orange coated slag; distinct petro- leum odor.
11242	18-24	Fill (wood fibers, asphalt-like material, glass, slag); moist; distinct petroleum odor.
3.	24-30	Same
	30-36	Same, some brick

sample is to undergo. These containers and the types of analyses they are appropriate for are defined by EPA in 40 CFR part 136 for aqueous samples and EPA's manual of Test Methods for Evaluating Solid Waste (SW 846; July 1982) for soil/sediment samples. The sample containers were prepared by Environmental Testing and Certification (ETC), the analytical laboratory used, and placed in preconfigured insulated and cooled shuttles.

The soil samples at BB&D were analyzed for 127 priority pollutants plus the next 40 highest peaks that were detected on the gas chromatograph. "Peak" is the parameter that defines concentration. By allowing for analysis of forty constituents that might have escaped detection if only target chemicals were specified, greater flexibility was incorporated into the analytical plan.

The term "priority pollutants" describes the pollutants' relative frequency of occurrence at potential hazardous waste sites, and represents a cross-section of inorganic and organic chemical groups. The 127 priority pollutants are the substances designated as toxic pollutants under Section 307(a)(1) of the Federal Clean Water Act (43 CFR 4108, January 1978), and are depicted in Table 2. In this table, NPDES is an abbreviation for National Pollutant Discharge and Elimination System. CAS stands for the Chemical Abstract Service, while MDL is the Minimum Detection Limit for each compound, measured in micrograms (10-6 grams) per liter of sample being tests.

3.2.2 Groundwater

Samples of groundwater on the BB&D site were obtained from two wells along the eastern boundary. The objective in locating these two wells was two-fold: first, to ascertain whether groundwater contamination existed, and second, to see if there were noticeable differences in the nature and degree of contamination. If there were marked differences in either of the two factors, one or all of the following conditions may exist: different sources of contamination (i.e. leaking drums or leaching ash piles), unconnected hydrologic systems, or varying proximities to a single contaminant source. Both wells were downgradient of the potential contaminant sources on the site. Background conditions or the exact direction of groundwater flow could therefore not be determined. This data is not needed until contamination has been verified. If contamination is detected, then at a minimum the installation of an upgradient well and one more downgradient well will be needed.

3.2.2.1 Monitoring Well Installation

The installation of both monitoring wells 2 and 3 was performed in accordance with NJDEP's Bureau of Groundwater Management recommended procedures. Though not required for this investigation, adhering to these procedures will insure their acceptance as New Jersey Pollutant Discharge Elimination System (NJPDES) monitoring wells, should the site prove to have contaminated groundwater. A NJPDES permit is required by owners/operators of sites that have the potential to be discharging effluent (i.e., contaminated leachate) to the groundwater.

The borehole for installation of the monitoring wells was made by a hollow stem auger attached to a well rig. The auger was steam cleaned prior to use and between wells. It was scaled with chalk to every 6 inches to determine the sample depth. Samples were taken at the last two feet of every 5 foot segment (i.e. 3-5 feet, 8-10 feet below land surface). The results of the boring logs for the monitoring wells are in Appendix D. Both boreholes had distinct petroleum odors with significant amounts of tarlike material.

Approximate depth of hole and depth to water table were made using a weighted string. Borings were generally made to a depth of 10 to 12 feet below the water table. After the hole was bored to the desired depth, the augers were disconnected from the rig but left in the hole to support the sidewalls. The hole was flushed clean of soil cuttings using a roller bit and pressurized potable water. The flushing operation ceased when the water discharging from the hole was clean. The roller bit was then removed from the hole, and the well screen installed into the borehole with the hollow stem auger still in place. The 4 inch O.D. (outer diameter) PVC well screen had a plastic cap attached to its bottom and was threaded into a 4 inch O.D. well casing at its top before placing it into the borehole. The top of the casing rose to approximately two feet above the ground surface. The area between the borehole walls and the well screen (the annular space) was filled with #2 Morie sand to maintain a good hydraulic connection between the aguifer material and the well screen. The auger was slowly lifted out of the borehole as the annular space was being filled. Eventually the auger was removed and the sand was emplaced until it was 6-12 inches above the well screen. A bentonite/cement grout was then injected into the hole until it was flush with the ground surface, and a 6" O.D. steel casing placed over the inner casing and set into the sealant (bentonite/cement mixture). Next, the steel casing was locked and security posts were placed around the well. All materials and specifications for monitoring wells 2 and 3 are detailed in Appendix D along with their permits from the Bureau of Water Allocation.

3.2.2.2 Well Development

Well development took place soon after installation of the wells, in order to create a good hydraulic connection between the aquifer and the well screen. Development of a monitoring well can be accomplished by a variety of methods and equipment. A well is satisfactorily developed when pumping the well yields a sand-free discharge.

Monitoring well #3 was developed with a hand bailer until the well went dry. Its discharge was extremely turbid but did not contain much sand. Monitoring well #2 was developed by pumping with a suction pump for approximatel: 70 minutes at a rate exceeding 10 gpm. Its discharge was relatively turbid free.

3.2.2.3 Groundwater Sampling

Seven days after the wells were developed, but prior to their sampling for chemical analyses, samples were collected and tested for total organic carbon (TOC), and if turbid, for grain size distribution of the sediment. (Measuring these constituents is recommended by the USEPA for assessing the integrity of monitoring well installation and development on RCRA sites.)

The water was purged from each well using a bladder pump with a check valve for regulating discharge. The purge water for sediment size distribution was collected in glass containers, while the TOC samples were collected in the appropriate container and preserved. All containers and preservatives used for storing groundwater samples after collection were laboratory cleaned and composed of materials appropriate for the intended analyses in accordance with 40 CFR 136. The appropriate containers for each type of analyses is listed in Appendix C. The analyses for both parameters were performed the next day. The results of the grain size distribution and TOC analyses indicated that the majority of the purge water was silt, clay and organic material with very little sand.

Samples for chemical analyses were collected from the monitoring wells after evacuating a minimum of 3 times the volume of standing water in each well with a bladder pump. This was to insure that only fresh, nonstratified aquifer water was being sampled. The polyethylene tubing placed into each well for evacuation was dedicated to that well only. The depth to water and the depth of well were measured before sampling to determine the volume of water in each well using an oil/water interface meter.

Prior to and after evacuation of each well, field measurements were taken of several parameters that are usually considered controlling variables of the chemical speciation found in water quality analysis. The parameters are also signatures of the water that help determine whether the water recovered in a well is stable after evacuation, compared to the water previous to evacuation. The results of the field measurements are in Table 3. These parameters and the methods for measuring them are as follows:

- pH A measure of the hydrogen ion concentration in the water.

 Measured with a Beckman 21 pH meter calibrated in the field with standard pH solutions of 4 and 7. Initial pH's were taken of water pumped from the well during purging (evacuation) and of the water collected from sampling. Water samples used for measuring pH were not kept for further chemical analyses.
- Salinity Measures the total salt content in the water to determine whether it is fresh, brackish or saline. Measured in each borehole before purging and after sampling with a YSI #33 S-C-T meter. Neither well had saline water.
- Conductivity An indirect measure of the total dissolved solids in solution. The measurements are in micromhos, a unit indicating the conductivity of the solution and therefore all ionized species. The micromhos units can be converted to mg/l of total dissolved solids by using a conversion factor (0.55 to 0.90) that is based on the source of the water and the types of charged chemical species that dominate the solution. Conductivity was measured the same way as salinity.
- Temperature Measured in each borehole prior to purging but after sampling using the YSI S-C-T meter.

Table 3
FIELD MEASUREMENTS OF PARAMETERS AT MONITORING WELLS 2 AND 3

	MW2	MW3
Date	5/27/86	5/27/86
Time	10:00 a.m.	1:27 p.m.
Water Level	3 .57'	3.72'
pH (units)	7.24	8.35
Salinity (ppt)	1.0	0.5
Conductivity (micromhos/cm)	1,500	1,300
Temperature (°C)	14	19

Immiscible Layers

Light Phase	No	No
Dense Phase	No	No
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Total Organic Vapors (ppm)	400	350
Total Organic Carbon (mg/l)	61.5	37.5

Source: Louis Berger & Associates, 1986.

Immiscible Layer Measurements - Immiscible layers are concentrations of organic liquids that are insoluble in water and therefore form a distinct layer above the water table and/or at the bottom of a borehole. Where layers of either light or dense phase immiscibles are detected, separate samples of these layers will be taken. These measurements were made prior to purging and just before sampling with an oil/water interface sounding probe (Oil Recovery Systems - Interface Meter, Model 100EN/M) that transmits a steady beep when hitting an immiscible layer and in intermittent beep when in water.

Measurements in both monitoring wells indicated no distinct immiscible layers.

Depth to water and depth of well measurements were made during development of each well, prior to evacuation, during recovery of the well and before and after sampling using the oil/water interface probe. Measurements were made to the nearest 0.01 foot.

All sampling of groundwater was performed using 36 inch long, teflon coated, single-bottom, check-valve bailers dedicated to each well. They were cleaned by the laboratory doing the chemical analyses and wrapped in autoclaved tinfoil. The wire used to rinse and lower each bailer was also teflon coated. The sampling procedures were as follows:

- a) Each well was allowed to recover after purging, and sampling began when the water had risen to within 0.1 feet of water level prior to purging.
- b) Each bailer was removed from tinfoil, tied to teflon coated wire which was connected to a circular spindle, and lowered into the corresponding well.
- c) Volatile organics (VOA's) were sampled first by lowering the bottom of a bailer until it was entirely submerged below the water surface so as to sample any light phase immiscibles. Extreme care was taken when lowering and raising the bailer so as not to degas the sample. The sample was then transferred into the sample container by pushing the ball check-valve located at the bottom of the bailer upward with a finger and allowing the water to flow into the container. No air bubble or head space was left in the VOA containers.
- d) The same method as (c) was used to collect samples for all other analyses but at depths in each well ranging from 18 to 48 inches below the water surface. Samples retrieved for metals analysis were first filtered through disposable 0.45 micrometer pore size cellulose acetate filters, and then stored in the appropriate containers and preserved. This is to minimize the effect that the sediment might have on the concentration of the metals in solution while the sample is awaiting analysis. The result of the analysis is reported as total dissolved metals.

e) After a sample was collected, depth of water, salinity, conductivity and temperature were measured and recorded. After removal of all probes, the plastic cap was fitted to the top of the inner casing and the steel protective casing was locked.

The groundwater samples collected and preserved were analyzed for the 127 priority pollutants plus 40 peaks. A listing of the priority pollutants categories are provided in Table 2 of Section 3.2.1.3.

3.3 Quality Assurance

The chain of custody is a quality assurance/quality control (QA/QC) measure to provide for the integrity of the sampling and analytical process. Chain of custody procedures were carried out in accordance with NJDEP and USEPA guidelines. The chain of custody forms used for each sample are contained in Appendix C.

All data on types of chemicals and their levels reported by ETC Laboratories have been critically evaluated with respect to data acceptance criteria which include accuracy, precision, representativeness, completeness and reliability. The evaluation was done according to NJDEP's guidelines for these criteria.

The data were found to meet these criteria with a few exceptions. The data are presented in the enclosed tables. Those data which did not meet the above mentioned criteria for acceptance are flagged with USEPA's data qualifier code letters. The qualifier codes are annotated and the code letters with annotations written next to the qualified data. Definitions of codes are presented at the bottom of Tables 5, 6 and 7 showing related data. Thus, concentrations of analytes flagged with code "J" are to be considered estimated concentrations.

The samples were analyzed for 127 priority pollutants plus 40 peaks. The tables show only those compounds which were "hits" in any of the samples. Compounds not detected in any sample are not included.

Data related to the volatile organic fraction meets our quality assurance criteria except for methylene chloride. Reported levels of methylene chloride are to be treated as estimated concentrations.

Data related to acids and base/neutral extractable compounds, metals, total phenolics and total cyanides meet acceptance criteria.

All concentrations reported for pesticides and PCB's are to be considered estimated concentrations. These compounds were found in the soil samples, but not in any of the water samples (see Tables 5, 6 and 7). The laboratory had difficulty in analyzing for these parameters due to matrix interference and had to repeat extraction and analyses. However, reextraction was done past the time limit allowed by NJDEP. The laboratory will obtain a decision from USEPA/NJDEP to allow acceptance of these results as valid. In the meantime these data could be used in characterization of the site.

4.0 RESULTS OF ANALYSES AND CONCLUSIONS

The sampling area has been divided into three sections for the purpose of relating chemical results to site characteristics. Area A covers the buildings, above and below ground tanks and the oil/water trench. Monitoring well #3 is in this area. Area B encompasses the dock area, trailer storage and the storm sewer system. No monitoring well is in this area. Area C includes the shredded tire pile, part of the storm sewer system, and is directly down gradient of the drum storage area. Monitoring well #2 is located in Area C.

Results of soil and water analyses from samples taken from the BB&D property are presented in Tables 5, 6 and 7 and correspond to Areas A, B and C, respectively. Table 4 depicts the cleanup level criteria used by the NJDEP's Bureau of Industrial Site Evaluation (BISE) to determine if a cleanup action should be taken. BB&D is currently being regulated by USEPA under RCRA, but the BISE cleanup levels provide a measure against which the results may be judged. Many of the parameters do not have specific criteria to be judged by, but instead are included in the totals for a whole group of contaminants that have a single cleanup level. Other parameters, such as acid extractable organics in soils do not have any clean-up criteria. The location of the results that exceed the BISE clean-up levels are summarized in Figure 4, along with their respective parameters.

Specific levels for many of the parameters in the USEPA Priority Pollutant List (Table 2) for both soil and groundwater are currently being developed, and may be applicable to this site when they are approved in the Federal Register.

As noted in Section 3.3 all concentrations reported for pesticides and PCB's are to be considered estimated or provisional. The analysis procedures did not meet USEPA and NJDEP Quality Assurance requirements. The laboratory will either have to obtain written confirmation from these agencies of their validity or resampling and reanalysis will be undertaken at the laboratory's expense. However, for the purpose of general description of contamination at the site they are considered valid, as the infringement was of a technical nature.

As previously indicated each sample was analyzed for the 127 "priority pollutants," a list of specific chemicals, and the results were fully quantified. In addition a search was made for other chemicals present with the highest concentration. Attempts were made to identify a total of up to 40 other chemicals, including 15 volatile organics, 15 base/neutral extractables, and 10 acid extractables. These concentrations are only reported in a semiquantitative form, and therefore only represent a rough estimate of the concentrations of the chemicals found.

The full laboratory analysis reports (NJDEP Tier II format) have been reviewed by our QA Coordinator and are maintained in our document control system. They are available for review upon request.

4.1 Soils

Area A

Priority pollutant heavy metals were the most significant contaminants in all three soil samples (M188, M189 and M198) in Area A. Samples M188 and M189 had levels of cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), mercury (Hg) and zinc (zn) all exceeding BISE cleanup levels (Cr in sample M188 was 99 mg/kg which is 1 mg/kg below the cleanup level). Sample M198 had only excessive levels of lead with all other priority pollutant metals below cleanup levels.

The source of these metals may be from the impurities in the reconditioned steel drums which are removed during the incineration process. The ash from the incineration concentrates these metals which can then be leached. Other sources can be from the drum reconditioning building and overflows from the oil/water trench which also contains metal from the incinerator leachate. The levels found in LB&A's investigation are lower than those detected by the USEPA analysis of the ash pile and soils near the incinerator but consistent with those findings (see Appendix A). Where metal concentration in ash and incinerator soil was in the hundreds to thousands (mg/Kg) the soil near the settling and holding tanks was in the tens to hundreds (mg/kg) range.

Area A had surficial soils (0-24") with excessive levels of organic con-Itaminants. The organics in high concentration were polycyclic aromatic hydrocarbons (PAHs) and phthalates from the base/neutral extraction group. The total concentration of all priority pollutant base/neutral organics exceeded 110 mg/kg (see Table 5), with the phthalates comprising over 85% of the total. When additional peaks of the non-priority pollutants are figured in the total, the diversity of organic compounds increases to include other aliphatic and monocyclic aromatic hydrocarbons besides phthalates. In sample M1188, alkanes, a group of aliphatic hydrocarbons registered at over 76 mg/kg, while total monocyclic aromatic hydrocarbons which includes the tri and dimethyl benzenes exceeded 58 mg/kg. Both of these classes of chemicals were conspicuously absent in sample M1189 which is only 30 feet south of M1188. Sample M1198, taken from the first two feet of soil of monitoring well #3, also had low levels of nonpriority pollutants, except for alkanes, which were over 2.6 mg/kg. (Note: Resu (Note: Results of non-priority pollutants are semiquantitative and useful only in indicating their presence and general level of concentration.)

There are no BISE criteria for cleanup levels of base/neutral extractables in soil, but polycyclic aromatic hydrocarbons are either known or suspected carcinogens and are included in the range of constituents found in sample M1188. There were no other excessive levels of contaminants in any of the soil samples in Area A, except for PCB's in sample M1188, at a concentration of 19.1 mg/kg. The BISE cleanup criteria for PCB's in soils is 1-5 mg/kg while USEPA does not regulate PCBs with a concentration of less than 50 mg/kg.

TABLE 5 SUMMARY OF AREA A CHEMICAL ANALYSIS RESULTS

Sample #	M1188	M1189		M1213	M1214	M1215
Units	ug/kg			ug/kg	ug/kg	ug/1
Date of Submission		25-Apr		6-Apr	26-Apr	27-May
Depth	0-18"	0-18"	0-2'			
Composite/Discrete	D	D	D	C	C	D
Soil (S)/Water (W)/Sediment (X)	8	6	8	X	×	W
VOLATILE ORGANICS				- 0		
PRIORITY POLLUTANTS			- 1			
Benzene	ND	ND	ND	NA	NA	ND
cis-1,3-Dichloropropylene	ND	ND	ND	NA	NA.	ND
Ethylbenzene	£28.10	J2 ND	עו אם עו	NA.	NA.	ND UJ2
Methylene chloride	158	ND ND	ND U	NA	- NA	ND DOZ
Tetrachloroethylene	ND	ND	MD	MA	NA	ND
Toluene	33	2	ND	NA	MA	ND
Totals	219.1	2	0	NA	NA	0
ADDITIONAL PEAKS (SEMI-QUANTITATIVE)						
2-Methyl hexane	ND	MD	-NID	MA	MA	ND
2-Pentanone, 4-Methyl	EXD	- ND	ND	NA	NA.	ND
2-Propanones	ND	ND	ND	MA	NA.	
3-methyl benzene	MD	ND	MD	NA	NA.	ND
3-Methyl pentane	AND	MD	NTD	. NA	NA.	ND
4-Ethyl 2-Pentanone	MD	ND	MD	. NA	NA.	ND
4-Methyl 2-Pentanones	ND	MD	ND	NA	AZA	
Acetone	1870	ND	ND	NA.	NZA.	
Alkanes	50	MD	MD	NA.	NA.	
Alkyl benzene	. 150	200	MD	75.5	NA.	ND
Benzene ethenyl-methyl	100	MD	GR 2003	NA.	-	11
Benzene, 1,2,3-trimethyl	1570	50	100 M	MA	AZA.	ND
	0.75		ED	NA.	NA.	
Cycloheptane, methyl	89	NID	NO.	NA.	XX.	
Cyclohexanes, 1,1,3-trimethyl	1870	_	ND	NA	MA	977
Cyclohexane, 1,1-dimethyl	76	MD	MD	MA	257	
Cyclohexane, 1,3-dimethyl	64	10D	MD	MA	MA	
Cyclohexanes, 1,3-dimethyl, cis	MD	720	150	E.	122	
Cycloheranes, 1,3-dimethyl, trans	120		200	107	100	
Cyclohexane, 1, 1, 3-trimethyl	MD		100	EA.	1674	
Cyclonexame, 1, 2-dimethyl, cis	120	_	180	MA.	327.	
Cyclonesane, 1, 2-disethyl, trans	ED	1000	NED.	100	M.	
Cyclohexane, 1, 3-dimethyl, trans	100		MD	MA.	10.	-
Cycloherane, 1, 4-dimethyl, cis	100		100	EA	N.	
Cyclonezane, i-sthyi-4-methyl cis	150		. ED	17	100	
Cyclonerane, 1-ethyl methyl trans	120	NO.	100	12	100	
Cyclohexanome, 3,3,5-tramethyl	حدے	_	E	-	123	
Cycloomane, buryl	£176	2	100	15.		
Cyclopentane, methyl	, 120	120	100	100	No.	
Cyclopectane, 1, 5-circiny1, trans	100	- 10	1	100	100	
Dimethyl benzenes	100	100	100	EZ.	100	150

J2= Estimated concentration due to IRDS for response factor in inital calibration higher than 305
MD = Not Detectable
UJ1 = Estimated quantitation limit 15ug/kg
UJ2 = Estimated quantitation limit 16.3ug/1

MA = Not analyzed for this parameter

					- 0	
	M1188	M1189	M1198	M1213	M1214	M1215
**	ug/kg	ug/kg	ug/kg	ug/kg	ua/ka	ug/1
Submission			05-May	26-Apr	26-Apr	
(2000)	0-1B"	0-18"	0-2			
te/Discrete	D	D	D	C	C	1
)/Water (W)/Sediment (X)	S	5	S	x	x	
		-	75,000			
E ORGANICS ADDITIONAL PEAKS (SEMI-O	UANTITATIVI	E) CONT	LNUED			
1 cyclohexane	ND	ND	ND	NA	NA	NI.
1 cyclopentane	ND	ND	ND	NA	NA	N
1-3-hexene	ND	ND	ND	NA	NA.	N
1.1'-oxybis	ND	ND	ND	NA	NA	N
ethyl benzene	MD	ND	ND	NA	NA	N
, methyl	ND	ND	ND	NA	NA	N
rbons	ND	ND	ND	NA	NA	N
cyclohexane	ND	ND	ND	NA.	NA.	N
es	ND	MD	ND	AZE.	NA	M
enes	ND	ND	ND	NA	NA	N
, 3-methyl	ND	ND	ND	N/A	NA	N
s, methyl	ND	ND	ND	NA	NA	N
benzene	ND	ND	ND	NA.	NA	N
	ND	ND	ND	NA.	NA	N
ACID EXTRACTABLES						
PRIORITY POLLUTANTS						
ophenol	, MD	ND	ND	MD	ND	N
hlorophenol	ND	ND	. ND	ND	ND	N
ethylphenol	*.230	ND	ND	ND	· ND	21.
lorophenol	ND	ND	ND	ND	. ND	N
	210	ND	ND	7 708	360	N
richlorophenol	ND	ND	ND	TO STD	, ND	N
Totals	440	. 0	. 0	708	360	21.
BASE/NEUTRAL EXTRACTABLES						
PRIORITY POLISTANTS				- 1		-
thene	. KD	ND	ND	ND	- ND	2.
thylene	:5	ND	BMDL	ND	ND	N
ene	F510	ND	BMDL	ND	ND	N
enthracene	NTD.	ND	BMDL	ND	15D	N
		ND	BALDI	ND	ND	N
formation promited to	(1.100					
pyrene	1.100		733	NT)	- KT	N.
)pyrene)fluoranthene	2,000	ND	733 ND	ND ND		
)pyrene)fluoranthene hi)perylene	2,000	ND	ND	ND	ND.	N N
)pyrene)fluoranthene hi)perylene thylhexyl)phthalate	2,000 ND 95,100	ND ND 44,600	12,200	206,000	114,000	N
)pyrene)fluoranthene hi)perylene	2,000	ND	ND	ND	ND.	N

Sample #	M1188	M1189	M1198	M1213	M1214	M1215
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/1
Date of Submission	25-Apr	25-Apr	05-May	26-Apr	26-Apr	27-May
Depth	0-1B"	0-18"	0-2	1 2 1 2 1		
Composite/Discrete	D	. D	D	C	C	D
Soil (S)/Water (W)/Sediment (X)	s	s	s	x	· x	W
BASE/NEUTRAL EXTRACTABLES, PRIORITY POLLUTA	NTS CONTI	NUED	:			
Dibenzo(a,h)anthracene	ND	ND	ND	IND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND
Diethyl phthalate	ND	ND	ND	19,900	ND	ND
Dimethyl phthalate	ND	ND	ND	ND	ND	NI
Di-n-butyl phthalate	ND	ND	420	48,000	4,600	NE
2,6-Dinitrotoluene	ND	ND	ND	. ND	ND	ND
Di-n-octyl phthalate	ND	ND	ND	3,700	ND	ND
Pluoranthene	€2,800	ND	BMDL	2,090	1,500	NI
Fluorene	ND	ND	ND	ND	ND	NI
Indeno(1,2,3-c,d)pyrene	, ND	· ND	ND	ND	ND	NI
Isophorone	ND	ND		ND	ND	NI
Naphthalene	-2,000	ND	BMDL	860	4,200	NI
N-Nitrosodiphenylamine	ND	ND	3.210	1,570	ND	NI
Phenanthrene	2.200	ND	BMDL	3,500	3,100	NI
Pyrene	4,100	ND	BMDL	2,130	1,200	100
1,2,4-Trichlorobenzene	100	ND	KD	ND	ND	B.24
crotals	,111,010	44,600	24,083	335,350	134,000	10.54
BASE/NEUTRAL/ACID EXTRACTABLES, ADDITIONAL	PEAKS (SE	MI-OUAN	TITATIV	E)		
1H-Indene octahydro 2,2,4,4,7,7-hexamethyl	6,560	. NO	ND	MD	MD	NI
li-Benzo(b) fluorene	ND	ND		· ND	ND	
1H-Indene, 2, 3-dihydro	ND	ND		ND	ND	NI
lH-Inden-5-ol,2,3-dihydro	ND			. ND	ND	
1,1'-Biphenyl	, NTD			ND	MD	N
1,2,3,4-Tetramethyl benzene	3,410	ND	ND	MD	ND	100
1,2,3-Trimethyl benzene	N.D	ND		ND	- ND	207
1-Methyl anthracene	ND	ND	ND	ND	ND	1 10
2.6-Dimethyl nomane	ND	MI	ND	- 10	9,080	M
2-Ethyl hexanoic	ND	NT	ND	4.234	. 180	32
2-Fthyl maphthalene	ND.	NI	ND	120	ND	20
2-hydroxy benzaldehyde	ND			ND	ND	N
2-methyl 1,1'-biphenyl	MD	NI	DZI C	ND	MD	N
2-Methyl anthracenes	NO			ND	ND	N
2-Methyl naphthalene	NO.	NI	ND.	ND		
2-Methyl phenanthrene	150	NI	NT)	ND		
2-methyl phenol	ND	NI				
2-Propendic acid, 2-Methyl, Dodecyl ester	NT.	NI	NZD.	\$3.834	N	127

Sample •	M1188	M1189	M1198	M1213	M1214	M1215
Units	uq/kq	ug/kg	ug/kg	ug/kg	ug/kg	ug/1
Date of Submission			05-May	26-Apr	26-Apr	
Depth	0-18"	0-18"	0-2			
Composite/Discrete	D	D	D	C	C	
Soil (S)/Water (W)/Sediment (X)	s	5	s	x	x	
BASE/NEUTRAL/ACID EXTRACTIBLES, ADDITIONAL	PEAKS (SE	MI-QUAN	TITATIVE) CONTIN	UED	
3-Ethyl-2-Methyl heptane	ND	ND	ND	ND	ND	N
3-Methyl phenanthrene	MD	ND	ND	ND	ND	N
3-Methyl phenol	ND	ND	ND	ND	ND	N
4-Methyl phenanthrene	ND	ND	ND	ND	ND	N
4-Methyl phenols	ND ND	ND	ND		ND	N
Alkanes	76,390	100	2, 66B	20,114	54,924	NI
Benzenesulfonamide, 4-methyl	ND	- ND	MD	- ND	ND	KI
Bicyclo(3, 2, 1)oct-2-ene, 3-methyl-4-methyler	ne ND	ND	ND	ND	ND	N
Cyclohexane, pentyl	DTD.	ND	ND	. ND	ND	N
Diethyl benzene	ND	ND	ND	ND	ND	N
Dimethyl 2-pentenes	ND	2,120	ND	ND	ND	N7
Dimethyl ethyl phenol	ND	ND	ND	ND	ND	N
Dimethyl heptane	ND	ND	ND	ND	ND	N
Dimethyl naphthalenes	ND	MD	ND	ND	ND	N
Dimethyl pentenes	ND	ND	ND	ND	ND	N
Dimethyl phenanthrenes	, ND	ND.	ND	ND	ND	N
Dimethyl phenols	ND	ND	ND	" ND	ND	N
Dimethyl-ethyl benzenes	/ ND	ND	396	ND	ND	12
Dimethyl-ethyl phenol	ND	ND	ND	ND	NID.	N
Ethanone, 1-(4-ethyl phenyl)-ethyl	KID	ND	ND	ND	NTO	N
Ethyl benzenes	ND	ND	ND	MD	ND	N
Ethyl methyl benzene	ND	MD	ND	ND	ND	N
Ethyl naphthalene	MD	ND	ND	ND	ND	
Ethyl phenols	1870	ND	ND	MD	ND	_
Ethyl- methyl benzenes	ND	ND	ND	ND	ND.	
Ethyl-1,2,3-trimethyl benzene	ND	MD	MID	MD	ND	N
Ethyl-1,2,4-trimethyl benzene	8.920	1STD	ND	MD	, ND	
Ethyl-dimethyl benzenes	9,640		1870	ND ND	ND	
Ethyl-methyl benzenes	4.840		17096	- MD	1870	
Ethyl-methyl phenols	MD	ND	ND	ND	NTD	
	MD	MD	ND	ND	KI	
Ethyl-propyl benzene	MD		MD	250	16.062	
Bexanel	ND	180	ND.	MD	11.010	_
	1870		ND		NT.	1 6 7
Bydroxy benzaldehyde			-	4,628		
Methoxy benzaldehyde	ED		100	ND	NI AND	
Methyl benzenes	ND		6	3,939	9,400	
Methyl ethyl benzene	100		ND	ND	NI	
Methyl Fluorenes	ND	177	ND	ND.	IM	
Methyl maphthalene	ND			ND	NI.	100
Methyl phenanthrene	MD	107-22-2	-	PD	TA	
Methyl phenols	120			MD	174	
Methyl-ethyl benzene	KD	ND	ND	ND	KI	

	K1186	M1189	K1196	M1213	K1214	M121
Sample #	ug/kg	ug/kg	uq/kc	ug/kg	ug/kc	Do!
Date of Submission		25-ADT	05-May	26-Apr	26-Apr	
	C-18"	0-1E"	C-2'	re-npr	ac np.	
Depth Composite/Discrete	. D	D	D	2	- c	
Soil (S)/Water (W)/Sediment (X)	S	S	S	x	. x	
BASE/NEUTRAL/ACID EXTRACTIBLES, ADDITIONAL	L PEAKS (SEM	I-QUAI	ITATIVE) CONTIN	UED	
Hethyl-ethyl phenols	ND	ND	ND	ND	KD	N
methylemethyl ethyl phenols	ND.	KL	, ND	ND	ND	N
Methyl-methyl-ethyl benzenes	₹, 290	ND	√627	ND	ND	N
Hethyl-naphthalene	ND	KD	ND	ND	ND	N
methyl-propyl benzenes	ND	ND	ND	ND	ND	N
Naphthalene, decahydro, trans	ND	ND	ND	ND	ND	N
a-propyl benzamide	ND	ND	KD	B. 490	ND	13
Phosphoric acid, triphenyl ester	ND	ND	ND	ND	ED	
Propyl benzenes	ND.	ND	ND	ND	ND	N
Tetrachlorobiphenyls	ND	ND	ND	ND	ND	N
Tetradecanoic acid	ND	ND		1,229	ND	N
Tetramethyl benzenes	MD	ND	ND	MD	ND	N
Tetramethyl butyl phenols	5,090	2,480	335	ND	ND	. 18
Trichlomethene	ND	ND	MD	MD	ND	N
Trimethyl benzenes	ND	ND	ND	ND	ND	E
Trimethyl naphthalenes	4.950	, ND	MD	MD	ND	
Trimethyl phenols	ND	ND	ND ND	ND	ND	. N
Xylenes .	5,580	ND	386	1610	MD	
PCB					الحوارون	
PRIORITY POLLUTANTS	67.		1		1	
Aroclor 1242	4.100 45.000	MD,	ND,	1 100	ND	N
Aroclor 1254					ED	B
Totals	49.200	2.200	3,600	0	. 0	
METALS		41 T		-		
UKITS	≥g/kg	29/kg	. mg/kg	mg/kg	mg/kg	25/
PRIDEITY POLLUTANTS				*	1. V/	
Antinony	13.60	D. 90	1.10	3.50	4.10	3.1
Arsenic	46.20	9.20	3.60	5.60	27.00	. 1
Deryllim	2.30	D. 09	ED	0.45	0.32	
Cacrine	11	24	1	100	16	2.5
Coronium	99	170	E	210	120	12.0
Copper	55C	233	1.10	223	530	7.8
Lead		790	330	970	720	
	980					
Heroury	1.20	2.50	0.44	55	2.00	
						C.E

JI - Estimated Concentration. Samples were reextracted past holding time limits as specified in 40277 part 136

TABLE 5 (CONTINUED) SUMMARY OF AREA A CHEMICAL ANALYSIS RESULTS

Phenolics, Total Cyanide, Total		1.00					0.06 <.025
PHENOLICS & CYANIDE UNITS		mg/kg	mg/kg	mg/kg	mg/kg	æg/kg	≥ g/1
Totals		0	. 0		389 3	324 ^J	1 0
Endrin aldehyde		MD		ND	65 31	MD	NE
Endosulfan sulfate		MD		ND	160 3	3,0	NI NI
4.4'-DDE 4.4'-DDD		ND	ND	ND	140	160	NT.
PRIORITY POLLUTANTS Beta-BHC		ND		ND	24 3	ND 130	NE
		-9/ -9		ug/ ng			
PESTICIDES UNITS	-7	no/ko	no/ko	ug/kg	ug/kg	ug/kg	uġ/L
Totals	-	4,221	2,005	339	2,978	4,466	114
Zinc	x 3	2,470	718	2.20	1,340	2,970	71.00
Silver Thallium		2.80 0.48	2.70 0.76	ND	2.90 0.39	0.16	2.00 ND
UNITS	4	100	mg/kg	mg/kg			70
METALS, PRIORITY POLLUTANTS CONTINUED		mg/kg	/-	/>-	mg/kg	mg/kg	ug/L
Soil (S)/Water (W)/Sediment (X)	0	S	S	Š	x	· x	W
Depth Composite/Discrete		C-18"	C-16.	(-2.	c -	c	D
Date of Submission		25-Apr	25-Apr	C5-May		26-Apr	
Sample #		ug/kg	ug/kg	ug/kg	ug/kg	ug/kc	ug/1

JI = Estimated concentration. Samples were reextracted mast holding time limits as specified in 40CRF part 136

Sediment

Two buildings within area A were sampled for total priority pollutants plus 40 by taking sediment samples in 5 different locations of each building. The 5 sediment samples were then composited for analyses.

The composite samples from the drum reconditioning building and the boiler rooms (M1213 and M1214) also reflected high heavy metal concentrations that exceeded BISE cleanup levels for Cd, Cr, Cu, Pb, Hg and Zn. These parameters are the same metals found in the two soil samples near the 5,000 gallons settling tank and oil/water trench. Considering the high levels of heavy metals found in the soils it was not surprising to find equally high metal concentrations in the drum reconditioning building. The use of this building made it susceptible to concentration in the floor drain from the effluent produced in chemical cleaning of the drums. But the degree of contamination found in the boiler room was unexpected and indicated flagrant contamination of structures not used in operations that would be the obvious sources of contamination. One possible explanation may be that given the age of the facility (original buildings dating back to 1931 - See Section 2.4 and Figure 2), the use of buildings has changed to its present use from one that may have caused the contamination.

Regardless of sources, the heavy metals contamination is prevalent in both the soils and buildings at levels that exceed cleanup levels and indicates widespread contamination.

Sample M1213, from the floor drain of the Closed Head Reconditioning Building, had excessive concentrations of the same organic constituents found in soil sample M1188: /phthalates, alkanes and lesser amounts of PAH's. Total priority pollutant base/neutral organics exceeded 300 mg/kg. The phthalates were much higher in the floor drain sample than in the soil of Area A, with bis (2-ethylhexyl)phthalate exceeding 200 mg/kg.

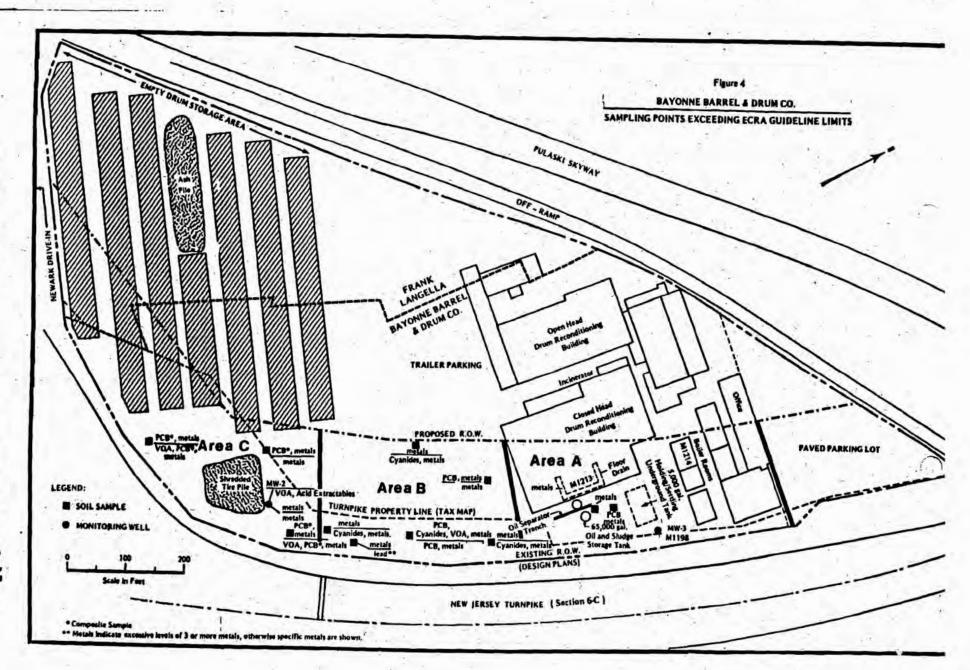
The presence of pesticides in both buildings is to be noted.

The Boiler Rooms (Sample M1214) had sediment samples taken off of their floors and walls. Though similar in constituency to the floor drain sample concentrations, total priority pollutant base/neutral organics made-up only 134 mg/kg, with phthalates being the primary constituent. Conversely, alkane concentration exceeded 54 mg/kg, as compared to 20 mg/kg for sample M1213. The pesticide concentrations were similar to those found in the floor-drain samples.

See Table 5 and Figure 4 for summary analytical results and location of excessive concentration levels, respectively.

Area B

Soils in Area B had a wide variety of contaminants from heavy metals and all organic groups, some of which exceeded the BISE cleanup levels. Area B covers the largest areal extent of the sampling program and receives runoff from the drum storage area and the tire pile, and overlays the storm sewer system. This makes it susceptible to various sources of contamination.



Units Date of Submission Depth Composite/Discrete Oil (S)/Water (W)/Sediment (X)	ug/kg 25-Apr (-18" D S	25-Apr 16-36* D S	192 19/kc 25-Apr 6-18" D	M193 ug/kg 25-Apr 16-36° D	1196 1197kg 26-Apr (-18"	ug/kc 2€-Ap: 1€-36" D	M_209 ug/kg 2i-Apr (-12- C	M1242 Ug/kç 26-Apr
VOLATILE ORGANICS				-	- 1			5
PRIORITY POLLUTANTS		_	-	_	-			
enzene	22,000	31,100	ND.	1:6	BMT.	ND		6.70
is-1.3-Dichloropropylene	CI CI	13D	Œ4	NTD.			NA	237
thy lbenzene	243,000 .		E 67	177	4.5	m 33.9	NA.	120
sthylene chloride	48, 800 J	3 .91.600	13 - MD	J3 ND	W4 ND	UJ5 ND	136 NA	120
etrachloroethylene	ND	CZ4	ND	ND	120	130		25.9
oluene	£265,000	321,000	ND	150	120		NA.	CZI.
	· L					15.4	NA	ND
Totals	e 576, 800	251,700	5. E3	1.6	4.5	49.3	7	
	-	20	-	5.0		45.3	/ NA	222.9
ADDITIONAL PEAKS (SEMI-DUALTITATIVE)		•				9		
Hethyl hexane							70.0	
Pentanone, 4-Methyl	150	ND.	TZD.	MD	KD	ED	KD	MD
Propanones	ME	ND	ND	120	ND	ED	ND	NTD.
methyl benzene	720	N.D	В	30	6	. 32	ND	ND
Hethyl pentane	MD	MD	10D	ND.	ND	KD	NTD.	150
Ethyl 2-Pentanone	69,000	15TD	MD	ND	ND	ND	ND	ND
Herbyl 2-Pentanones	NO.	ED	MD	120	100	ND	MD	ND
ELOne	200	200	ND	MD	MD	- 100	MD	1570
kanes	100	ND.	ED	ND	ND	120	ED.	100
kyl benzene	187D	ND.	120	120	120	150	ND	NZD.
nzene ethenyl-methyl	150	100	MD	ND	100	100	MD	NO.
nzene, 1,2,3-zzumezhyl	1820	ND	, X	ED	120	17	ND.	ND.
cloneptane, methyl	320	120	ND.	ED	ND	MD	ED	ND
cloheranes, 1,1,3-rrinethyl	150	MD	100	120	100	MD	MD	MD
cloherane, 1,1-dimethyl	MD	120	27	20	120	NZD.	MD	120
clohexane, 1.3-dimethyl	150	20	120	720	120	NO.	100	ZD.
clobexanes, 1,3-dimethyl, mis	MD	25D		120	ED	D	120	, ED
Clohermes, 1. 3-Campaint'	150	150	10	ED	120	ED	100	120
linerane	ED	150	1 9	D	100	D	100	100
Cherry	2	100		100	10	•	100	48
DODGETEDE,	20	. 2	0	0.0	10	2	E	37
PROTEIN	2	2	D				D	57
Cherrine	ā	100	D	E 0	10	10		26
innerane, i stryl - sering me	20	2	E	2	20	D	-	#
DONETEDE, I STONY			=	=		100	10	=
constance, 1,1,5-marry	12	nn	=	=	=	HBB	E	nnn*
LOCCIEDE, MINY	=	=	E	=	H		=	=
imperiene, merry'	2	Ē	Ē	E	1	_	=	E
strong between	<u> </u>	100		=	aua	E	=	
Ediya Delizenes	E	=	E	Ē	-		E .	11 E

Electronic concentrations due to prester than 25% difference between RF for initial calibration.

**RD = Not Detectable

**BND! = Selow Minimum Detection Limits

**U3 = Estimated quantitation limit 16.4ug/kg

**U3 = Estimated quantitation limit 27.1ug/kg

**U3 = Estimated quantitation limit 22.9ug/kg

**U3 = Estimated quantitation limit 17.8ug/kg

**U3 = Estimated quantitation limit 17.8ug/kg

TABLE 6 (CONTINUED)

Sample # Units Date of Submission Depth Composite/Discrete Soil (S)/Water (W)/Sediment (X)	keek as	M1190 ug/kg 25-Apr 0-18" D	25-Apr 18-36" D	ug/kg 25-Apr	ug/kg 25-Apr 18-36" D	M1196 ug/kg 25-Apr 0-18" D	28-Apr 18-36" D	M1209 ug/kg 26-Apr 0-18" C S	M1242 ug/kg 28-Apr
VOLATILE ORGANICS ADDITIONAL PEAKS	(SEMI-QUA	NTITATIVE) O	ONTINUED				- X		
dimethyl cyclohexane		ND.	ND	ND	ND	ND	ND	ND	NI
Dimethyl cyclopentane		ND	ND	ND	ND	ND	NO	ND	N
Dimethyl-3-hexene		ND	ND	ND	ND	MD	MD	, ND	N
Ethane, 1,1'-oxybis		ND	ND	ND	ND	ND	ND	ND	N
Ethyl-methyl benzene		ND	ND	MD	ND	MD	MD	ND	N
Heptane, methyl		, MD	ND	ND	ND	MD	ND	ND	N
Hydrocarbons		ND	\$4,000	NO	ND	ND.	ND	ND	N
Methyl cyclohexane		ND		KD	ND	ND	MD	ND	N
m-Xylenes			3,200,000	MD	ND	ND	MD	ND	N
Oip-Xylenes	71/814	1,310,000	2,280,000	ND	NO	MD	ND	MD	B
Pentane, 3-methyl		, ND	ND	MD		ND	MD	ND	E
Pentanes, methyl		ND		_	_	ND	ND	ND	1
Propyl benzene		MD		MD	1800	ND.	MD	MD	
Xylenes		ND	· ND	MD	, M	ND	ND	ND	B
ACID EXTRACTABLES									
PRIORITY POLLUTANTS	-1500		1111						
2-Chlorophenol		MD	(880) ND	MD	ND	ND	MD	. 1
2,4-Dichlorophenol -		470			ND	MD	MD	ND	178
2,4-Dimethylphenol	§	2,850			ND	MD	MD	t. 890	24
Pentachlorophenol «		. MD	MD	MID	MID	MD	MD	ND	1
Phenol -		4,130	1,500	800	MO	PHOL	MD	MD	140
2,4,6-Trichlorophenol		MD	NID	MD	MD	MD	ND	ND	1
Totals		¥,450	13,490	5,890		. 0	0	890	8, 2
BASE/NEUTRAL EXTRACTABLE	S						30-		
PRIORITY POLLUTANTS									
Acenaphthene		ND				-	0.000	The second second	3
Acenaphthylene		- 10D	G-1-22			_			1
Anthracene		4,700							
Benzo(a)anthracene		7,300							1,7
Benzo(a)pyrene		4,600						W. C.	2,5
Benzo(b)fluoranthene		8,450							4,1
Benzo(ghi)perylene /	and a	2,100						and the second second	
bis(2-Ethylheryl)phthalate		250,000	186,000			12,200		56,800	75,9
Burtyl benryl phihalate	242	(35,100	\$ 100		1000				9.0
Chrysene	1.02	7,910	(24,400).2.ZDC	2,700	690	- 50C	100 ED	2.1

TABLE 6 (CONTINUED) SUMMARY OF AREA B CHEMICAL ANALYSIS RESULTS

Sample # Unit:									
		M1190	H1191	M1192	H1193	M1196	M1197	H1209	11124
	-	ug/kg	ug/kg	uq/kq	ug/kg	uq/kg	ug/kg	ug/kg	Da/t
Date of Submission		25-Apr	25-Apr			28-APT	28-Apr	2P-Apr	28-AF
Depth		0-18"	19-36"	0-18-	18-36"	0-18-	18-36"	0-18"	
Composite/Discrete		D	D	D	D	D	D	C	
Soil (S)/Water (W)/Sediment	(X)	5	8	8	8	8	S	5	
BASE/NEUTRAL EXTRACTABLES.	PRIORITY POLLUTA	NTS CONTINUED			- 1				
Dibenzo(a,h)anthracene		ND	ND	ND	ND	ND	ND	ND	1
.4-Dichlorobenzene		ND	(11, BOD)	ND	ND	ND	ND	ND	1
Diethyl phthalate -		7.350	ND	ND	. ND	ND	ND	320	
Dimethyl phthalate		ND.	ND,	MD	, ND	330	ND	ND	
Di-n-butyl phthelate -		83.200	113.000	1,100	1.200	700	150	3.870	13,1
2.6-Dinitrotoluene -		ND	ND.	ND	ND	ND	1,900) ND	100
Di-n-octyl phthalate /		4,400	ND.	ND	ND	310	ND	2,060	5.4
Fluoranthene -		14.900	(35.900)	2.100	3.900	670	1.000	490	2.4
Fluorene /		7,400	29,300) ND	ND	80	130	220	1,8
Indeno(1,2,3-c,d)pyrene -		1,200	3.500		2,000	877	ND	560	
sophorone		ND	ND	MD	ND	600	ND	ND	
aphthalene -		50.800	(191.000	1.200	HD	680			31.0
-Nitrosodiphenylamine		ND	ND	ND	ND	ND			
henanthrene -	-	26,200	80.800		1.900	670	1.100		4.2
Pyrene /		19,200	(\$6,200	2,900	4.000	866			2.7
.2.4-Trichlorobenzene		5,600	24,700		ND.	MD		17.2	2.1
		0.000	24,700	,				230	
Totals		575.610	861,500	29,600	37,300	22,683	10,950	78.872	158,4
MASE/WEUTRAL/ACID EXTRACTIB	LES, ADDITIONAL	PEAKS (SEMI-O	ITATITHAU	E) CON	TIMUED	*	- 1		
	.7,7-hexamethyl	WD	ND	ND	ND	MD	MD		
H-Indene octahydro 2,2,4,4		man.		MD	ND	ND	ND.	ND	
		ND	ND	- U					
(H-Benzo(b) fluorene (H-Indene, 2, 3-dihydro		ND	ND ND	ND	.MD	MD	MD		
(H-Benzo(b) fluorene (H-Indene,2,3-dihydro (H-Inden-5-ol,2,3-dihydro		F15					MD	ND	
(H-Benzo(b) fluorene (H-Indene,2,3-dihydro (H-Inden-5-ol,2,3-dihydro		ND	MD	nD	-SID	MD	MD	ND ND	
(H-Benzo(b) fluorene (H-Indene,2,3-dihydro (H-Inden-5-ol,2,3-dihydro (,1'-Bipheny)		ND ND ND	MD MD	ND	-SID	MD	MI	ND ND	
H-Benzo(b) fluorene H-Indene,2,3-dihydro H-Inden-5-ol,2,3-dihydro (,1'-Biphenyl 1,2,3,4-Tetramethyl benzene	yes, 222	MD MD	ND ND	ND ND	UMD MD	MD MD	100 100 100 100	ND ND	
H-Benzo(b) fluorene H-Indene,2,3-dihydro H-Inden-5-ol,2,3-dihydro (.1'-Biphenyl 1,2,3,4-Tetramethyl benzene 1,2,3-Trimethyl benzene		ND ND ND	ND ND ND	ND ND ND	ON OTHER	ND ND	1970 1970 1970 1970	ND ND ND	
H-Benzo(b) fluorene H-Indene,2,3-dihydro H-Inden-5-ol.2,3-dihydro (1'-Biphenyl ,2.3,4-Tetramethyl benzene ,2,3-Trimethyl benzene -Wethyl anthracene		ND ND ND ND	MD MD MD MD	ND ND ND	AND IND IND IND IND	MD MD MD	NTD NTD	ND ND ND ND	
H-Benzo(b) fluorene H-Indene,2,3-dihydro H-Indene-5-ol,2,3-dihydro (,1'-Biphenyl ,2,3,4-Tetramethyl benzene ,2,3-Trimethyl benzene -Methyl anthracene		ND ND ND ND 49,600	ND ND ND ND ND	ND ND ND ND	AND IND IND IND IND	MID MID MID MID MID MID	NTD NTD NTD NTD	ND ND ND ND	
H-Benzo(b) fluorene H-Indene,2,3-dihydro H-Indene-5-ol,2,3-dihydro (,1'-Biphenyl ,2,3,4-Tetramethyl benzene ,2,3-Trimethyl benzene ,4-benzene ,5-Dimethyl momane H-Ethyl hezanoic	•	ND ND ND SO 49,600 ND	ND ND ND ND ND ND	ND ND ND ND ND ND	AND MID MID MID MID MID MID MID MID MID	MID MID MID MID MID MID MID MID MID	NTD NTD NTD NTD	ND ND ND ND ND	
H-Benzo(b) fluorene H-Indene,2,3-dihydro H-Indene,5-ol,2,3-dihydro (.1'-Biphenyl .2.3,4-Tetramethyl benzene 1.2,3-Trimethyl benzene 1-Methyl anthracene 2,6-Diwethyl monane 2-Ethyl hezanoic 2-Ethyl naphthalene	.	MD MD MD MD 49,600 MD MD	ND ND ND ND ND ND	ND ND ND ND ND ND	HID HID HID HID HID HID HID HID	MID MID MID MID MID MID MID MID MID MID	NO NO	ND N	2614
H-Benzo(b) fluorene H-Indene,2,3-dihydro H-Indene,5-ol,2,3-dihydro (,1'-Biphenyl ,2,3,4-Tetramethyl benzene 1,2,3-Trimethyl benzene H-Hethyl anthracene 2,6-Dimethyl monane H-Ethyl hezamoic H-Ethyl naphthalene H-hydrozy benzaldehyde	,	49,600 49,600 49,600 400 400 400 400 400 400 400 400 400	MD MD MD MD MD MD MD MD MD MD MD MD MD M	ND ND ND ND ND ND ND	SED SED SED SED SED SED SED SED SED SED	MID MID MID MID MID MID MID MID MID MID	NED STEE	ND ND ND ND ND ND ND ND	2614
(H-Benzo(b) fluorene (H-Indene,2,3-dihydro (H-Indene,5-ol,2,3-dihydro (,1'-Bipheny) (,2,3,4-Tetramethy) benzene (,2,3-Trimethy) benzene (,4-Dipheny) monane (,5-Dimethy) monane (2-Ethy) naphthalene (2-bydroxy benzaldehyde (2-methy) 1,1'-bipheny)	•	49,600 49,600 49,600 49,600 400 400 400 400 400 400 400	ALD ALD ALD ALD ALD ALD ALD ALD ALD ALD	MD MD MD MD MD MD MD MD MD MD MD MD MD M	MID MID MID MID MID MID MID MID MID MID			ND N	2614
H-Benzo(b) fluorene H-Indene,2,3-dihydro H-Indene,5-01,2,3-dihydro [,1'-Biphenyl ,2,3,4-Tetramethyl benzene ,2,3-Trimethyl benzene L-Methyl anthracene ,6-Dimethyl momane 2-Ethyl hezanoic 2-Ethyl naphthalene 2-hydroxy benzaldehyde 2-methyl 1,1'-biphenyl 2-methyl anthracenes		#D #D #D #D #D #D #D #D #D	MID MID MID MID MID MID MID MID MID MID	ND N	MID MID MID MID MID MID MID MID MID MID			ND N	2614
IH-Benzo(b) fluorene IH-Indene,2,3-dihydro IH-Indene-5-ol,2,3-dihydro I,1'-Biphenyl I,2,3,4-Tetramethyl benzene I,2,3-Trimethyl benzene I,2,3-Trimethyl benzene I,2,6-Diwethyl momane I,5-Diwethyl momane I-Ethyl maphthalene I-hydroxy benzaldehyde I-hydroxy benzaldehyde I-Hethyl anthracenes I-Hethyl maphthalene		#ID #ID #ID #ID #ID #ID #ID #ID #ID #ID	HID HID HID HID HID HID HID HID HID HID	ND N				ND N	2614
IH-Indene octahydro 2,2,4,4 IH-Benzo(b) fluorene IH-Indene,2,3-dihydro IH-Indene,2,3-dihydro IH-Inden-5-ol,2,3-dihydro I,1'-Biphenyl 1,2,3,4-Tetramethyl benzene 1,2,3-Trimethyl benzene 1-Hethyl anthracene 2,6-Diwethyl monane 2-Ethyl hezanoic 2-Ethyl hezanoic 2-Ethyl hezanoic 2-Ethyl hezanoic 2-Ethyl hezanoic 2-Hethyl mentaldehyde 2-methyl 1,1'-biphenyl 2-Hethyl methracenes 2-Hethyl methracenes 2-Hethyl methracenes 2-Hethyl phenanthrene 2-methyl phenanthrene		#D #D #D #D #D #D #D #D #D	MID MID MID MID MID MID MID MID MID MID	ND N	MID MID MID MID MID MID MID MID MID MID			ND N	2614

^{3 -} Ferimeted concentration. Of Blank contaminates of 2 250g. 1 of di-moutel intowlate

TABLE 6 (CONTINUED) SUMMARY OF AREA B CHEMICAL ANALYSIS RESULTS

Sample #	M1190	M1191	M1192	M1193	M1196	M1197	M1209	M1242
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Date of Submission	25-Apr	25-Apr	25-Apr	25-Apr	25-Apr	28-Apr	26-Apr	26-Apr
Depth	0-18"	18-36"	0-18"	18-36"	0-18"	18-36"	0-18"	
Composite/Discrete	D	D	D	D	.D	D	C	C
Soil (S)/Water (W)/Sediment (X)	8	S	. 5	8	8	. s		S
BASE/NEUTRAL/ACID EXTRACTIBLES, ADDITIONAL PEAR	S (SEMI-QU	ANTITATIV	E) CONT	INUED	or The Control			-
3-Ethyl-2-Methyl heptane	ND	21,100	ND	ND	ND	ND	ND	ND
3-Methyl phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND
3-Methyl phenol	ND	ND	700	MD	ND	ND	ND	8,676
4-Methyl phenanthrone	· ND	ND	MD	· ND	ND	ND	ND	ND
4-Methyl phenols	ND		73,500	ND	ND	ND	ND	10,771
Alkanes	196,600	243,500	17,170	100	MINAD	2,241	13,350	123,250
Benzenesulfonamide, 4-methyl	ND	ND	ND	ND	378	. ND	ND	ND
Bicyclo(3,2,1)oct-2-ene,3-methyl-4-methylene	MD	ND	ND	ND	ND	ND	ND	ND
Cyclohexane, pentyl	ND	ND	MD	MD	ND	ND	MD	ND
Diethyl benzene	ND	ND	ND	· MD	ND	ND	MD	ND
Dimethyl 2-pentenes	ND	ND	7,250	ND	MD	ND	ND	ND
Dimethyl ethyl phenol	MD	MD	ND	MD	ND	ND	NO	ND
Dimethyl heptane	ND	MD	ND	- ND	ND	ND	ND	ND
Dimethyl naphthalenes	ND	ND	ND	ND	ND	ND	MD	ND
Dimethyl pentenes	NTD	ND	MD	MD	ND			NTD
Dimethyl phenanthrenes	ND	ND	MD	MD	MD	NID	ND	ND
Dimethyl phenols	ND	ND	ND	ND				NID
Dimethyl-ethyl benzenes	ND	ND						ND
Dimethyl-ethyl phenol	ND	MD						58,969
Ethanone, 1-(4-ethyl phenyl)-ethyl	MD	ND						MD
Ethyl bensenes	91,300	67,700	MD					the second state of the second
Ethyl methyl bensene	ND	MD	ND			1		
Ethyl naphthalene	ND	ND	-					
Ethyl phenols	MD	MD	ND	-				
Ethyl- methyl benzenes	MD	ND					_	
Ethyl-1,2,3-trimethyl benzene	ND	ND					-	
Ethyl-1,2,4-trimethyl benzene	MD	NTD				_		
Ethyl-dimethyl benzenes	96,300	ND				-		114,556
Ethyl-methyl benzenes	388,900	129,900		_				
Ethyl-methyl phenols	ND	123,300						
Ethyl-propyl benzene	MD	MD						
Hexadecanoic acid	MD	100			_	7.0	_	
Seranal	ND.	MD						
Hydrory benzaldehyde	MD	3500						
Hethory benzaldehyde	ND		19.600				_	_
Methyl henzenes	113,000	47,400						
[123,000	ND		-				,
Methyl ethyl benzene	100	MD						
Methyl Fluorenes					_			
Methyl naphthalene	100	180	1 7	77.0		-		
Methyl phenanthrene Methyl phenols	E .	NT.				The second second		
Methyl phenois		100						

TABLE & CONTINUED STABLE DE AREA I CHEMICAL ANALYSIS RESULTS

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Sample 4	H1190	M1191	M1197	#119?	H1194	11110-	111200	*: 24:
lingte	uo/ko	uo/ko	UG FAC	uo/ka	UO/RE	uc/ke	10/45	na
Date of Sulmission	25-Apr	25-APT	25-Ap:	25-AP1			34-VL:	741:
Hepth	(-18-	16-36-	(-1b.	16-36"	4-16.	16-36-	(+- 1 b.	
Composite/Discrete	D	· · ·	ľ	1	11	15		C
Scal (S)/bater (W)/Sediment (X)		5	5					
BASE/NEUTRAL/ACID EXTRACTIBLES, AUDITIONAL PE	NIS (SEN)-DUA	TITATIVE) CONTI	NUEL.				
				4	200		1 2000	2401
Hethyl-rthyl phenols	ND	MD	NL	MI	MI	tati	157	151.
tiethyl-methyl ethyl phenols	MI	. ND	NI	ND	NI	141.	15L	111.
Hethyl-methyl-ethyl Denzenes	ND	48,400	ML	3.180	ML	MI	121	1419
Hethyl-naphthalene	ND	26.300	A- NU	······ ND	MI.	· Harris	UL	W1:
the Cult 1-ht Did 1 pentremer		. 36,300	MD.	2017		Gallett.	4,925	
Haphthalenc, decanydro, trans	WID	NU	MI	NI	13(1)	191,	ISL	121
H-propy1 benzamide	ND	ND	MI	Mi	ND	\$311	111.	1712
Phosphoric acid, triphenyl ester	-ND		ND	ND	MD	NI	#IL	191.
Propyl benzenes	27,600	17.700	MI.	, MD	SEL	NL	EL.	6313
Tetrachlorobiphenyla	NL	MD	ND	ND	ML	HI	111)	MD
Tetradecanoic acid	MD	MD	HD	MD	W	MI	HT.	est.
Tetramethyl benzenen	112,200	. ND	ML.	MD	1.182	861.	5,842	25,960
Tetramethy! buty! phenols	ND	MD	MD	MD	1127	1317	ME	1515
Trichlonethene	ND	MD	MI	MD	631)	ND	ND	MD
Trimethyl benzenes	MD	82.100	ND	MD	894	ND	ML	1915
Trimethyl naphthalenes	MD	MD	MD	160	61L	MI	HD	1313
Trimethyl phenols	ND	ND	ND	ND	MD	Mi	111)	NU
Rylenes	475,000	238,700	3.600	ND	1.869	750	mu	732:360
LCR								75.207.16
PRIORITY POLLUTANTS								
Arocior 1242	MD.	WD.	ND	MD.	11D	- NI	WD.	TH.
Arocior 1254	27.000 ³	73.000	\$7,000	111.400	1,000	31 140	2.800	1,100
Totals	€7.00cJ1	73,000	87,000	11.400	1.800	JI 140	12,000	J1 1.100
METALS								
UNITS	mq/kg	mg/kg	-g/k	mg/kg	mg/kg	œq/kq	mp/kg	ma/kg
PRIORITY POLLUTANTS	-	1			1.17			
Antimony	12.00	18.00	1.70	3.20	1.00		6.70	12.00
Arsenic	38.00	73.00	24.00	28.00	5.60	1.50	18.CC	62.00
Beryllion	1.20	C.18	D. 52	0.59	0.38		0.25	9.70
		71	6	10	7.90	0.35	27	29
Cadmium	63							
Chrons on	790	. 590	67	96	130	10.00	325	510
					130		1130	2,050
Chromium	. 790	. 590	67	96		34		2,050
Chroma um Copper	1.580	590 870	380	430	140	1.060	1:50	2.050
Copper Lead	1.580 8.200	590 870 6,520	390 1,440	96 430 HD	1.010	1.060 0.27	2,500	2.050 5.600

JI - Estimated Concentration. Samples were reextracted past holding time limits or specified in 40077 part 136

TABLE 6 (CONTINUED) SUMMARY OF AREA D CHEMICAL ANALYSIS RESULTS

Sample #	M1190	M1191	H1192	m1193	H1196	M1197	111209	111242
Units	ug/kg	ug/ka	va/ka	ug/kg	ug/kg	uo/ko	ug/kg	ug/kg
Date of Submission	25-Apr	25-Apr		25-Apr		28-Apr	28-APT	28-Apr
Depth	0-18"	18-36"	0-18"	18-36"	0-18-	18-36"	0-16-	as will
Composite/Discrete	D	D	D	D	D	D	C	C
Soil (S)/Water (W)/Sediment (X)	5	8	5	8	8	S	- S	8
METALS, PRIORITY PULLUTANTS CONTINUED		-, 1 -, 1			40.4			
UNITS	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Silver	2.80	2.70	6.40		0.69	0.22		4.40
Thallium	ND	ND	0.14			0.23		ND
Zinc	6,120	4.970	1.050	1,400	640	130	2.760	12.200
Totals	16,976	15,227	3,014	1.979	1,962	1,247	6,885	20,699
PESTICIDES								
PRIORITY POLLUTANTS								
Beta-BIIC	MD	ND.	- ND	MD	MD	ND	4	ND
4.4'-DDE	ND	ND	MD.		ND	ND	ND	MD
4.4'-DDD	MD	ND	MD			ND	3	ND
Endosulfan sulfate	ND	MD	ND					ND
Endrin eldehyde	MD	MD	MD	MD	MD	ND	ND	HD
Totals	-0.	- 0	. 0	. 0	-0	•	0	0
PHENOLICS & CYANIDE	8 V U V							
Unite	■g/kg	mg/kg						mg/kg
Phenolics, Total	13.00	0.24						5.90
Cyanide, Total	16.00	13.00	1.70	2.30	2.20	1.00	0.73	16.00

mples M1190 and M1191 were the only samples in Area B to have excessive vels of contamination from volatile organics (see Table 6 and Figure 4). 190 (0-18") and M1191 (18-36") both exceeded the clean-up levels of mg/kg tal volatile organics (VOA) used by the BISE, with total priority pollunt concentrations of 579 mg/kg and 852 mg/kg, respectively. There are so high concentrations of the non-priority pollutant VOA xylene (in all sisomeric forms) in samples M1190 and M1191. It is not surprising that e deeper sample had higher VOA concentrations as samples closer to the rface volatilize more easily. No other samples in Area B had concenations of VOAs exceeding 1 mg/kg.

mples M1190 and M1191 are also the only samples in Area B to exceed the earup level criteria for total cyanides (12 mg/kg) with concentrations of mg/kg and 13 mg/kg, respectively.

ganic parameters were higher in the 0-18" interval than in the 18-36" iterval, while others were higher in the lower depth interval than in the inface interval. For example, in samples M1190 and M1191, most of the iority pollutant base/neutral organic-parameters were higher in M1191 ian in M1190, while for alkanes (a nonpriority pollutant), xylenes and her non-priority pollutant base/neutrals, the reverse was true. The same true for M1192, M1193 and M1196/M1197 (which is upgradient of the M1190/191), but with lower concentrations.

ne alkane concentrations in the borings of samples M1192/M1193 and M1196/
.197 were likewise inconsistent, but to a greater degree. For M1192
)-18") the alkane concentration was 17.2 mg/kg while from 18"-36" (M1193)
nere was no detectable concentration. The opposite is true for samples
.196 and M1197: M1196 had no detectable levels of alkane while M1197 had
.2 mg/kg. Samples M1190/M1191, the boring for which is only 75 feet south
that for M1196/M1197, had high concentrations in both intervals.

CB's also greatly exceeded cleanup levels of 1-5 mg/kg in samples M1190, L191 and M1192 with concentrations of CB7 mg/kg, 73 mg/kg and 37 mg/kg, espectively. Samples M1190 and M1191 also exceed USEPA trigger levels 50 mg/kg.

eavy metal concentrations that exceeded BISE cleanup levels were detected all soil samples in Area B. The metals were the same as those found in rea A but with the addition of Arsenic (As), nickel (Ni), and silver (Ag). The highest levels were found in samples M1190/M1191 with Pb (8,200/8,520 g/kg), Cr (790/590 mg/kg), Cd (63/71 mg/kg), Hg (9.1/1.9 mg/kg), Zn (6,120 1,970 mg/kg), and Cu (1,580/870 mg/kg) well above other discrete soil amples concentrations. Only composite sample M1242 (18-36") had higher evels of Cu and Zn.

ne extensive metal contamination found throughout Area B is most likely rom leaching of the ash pile and runoff from the drum storage area. Area is in closer proximity to both these sources than Area A thereby esulting in higher contaminant levels.

35.3

TABLE 7 SUMMARY OF AREA C CHEMICAL ANALYSIS RESULTS

Sample # Units Date of Submission Depth	ug/kg 26-Apr 2	M1195 ug/kg 6-Apr 6-36"	M1203 ug/kg 06-may 3-5'		100000000000000000000000000000000000000	M1207 ug/kg 26-Apr 0-18"	M1208 ug/kg 26-Apr 16-36"	M1217 ug/1 27-May
Composite/Discrete Soil (S)/Water (W)/Sediment (X)	D S	D	D S	D S	D	. c	C S	D
VOLATILE ORGANICS								
PRIORITY POLLUTANTS	12.7					A. V.	21.50	1.6
Benzene	ND	ND	85.3	5.6	ND	4.53	1,100	5.58
cis-1,3-Dichloropropylene	ND	ND	ND	ND.	ND	ND	ND	ND
Ethylbenzene	1SID U.37	MD	JJ8 333	46	111	700		25.9
Methylene chloride	ND	M	34	ND	44	46.93	5,280	NDU.
Tetrachloroethylene	ND	ND	6.B	ND	ND	ND	ND	ND
Toluene	2.1	MD	318	. 58	85	25.2	218,000	76.6
Totals	2.1	0	777.1	109.6	240	96.53	268,680	98.08
VOLATILE ORGANICS, ADDITIONAL PEAKS (SE	U-QUANTITATIVE)	` × .					
2-Methyl hexane	IND.	ND	295	, MD	ND	NO	ND	ND
2-Pentanone, 4-Methyl	ND	MD	100	MD	MD	MD	ND.	323
2-Propanones	ND	ND	ND	. 71	ND	1,050	ND	64
-methyl benzene	ND	MD	ND	MD	ND	MD	62,000	ND
3-Methyl pentane	ND	ND	ND	MD	MD	MD	ND	ND
4-Pthyl 2-Pentanone	ND	ND	572	MD	ND	KD	ND	ND
-Methyl 2-Pentanones	MD	ND	ND	1,023	240	MD	ND	MD
Acetone	ND	MD	MD	ND	MD	MD	ND	ND
Alkanes	ND	ND	409	ND	ND	ND	ND	ND
Alkyl benzene	MD	MD	MD	NO	MO	MD	42,000	MD
Benzene ethenyl-methyl	MD	MD	ED	MD	MD	ED.	KD	. KD
Benzene, 1,2,3-trimethyl	MD	ND	ND	ND	ND	MD	ND	MD
Cycloheptane, methyl	, MID	ND	MD	NID	MD	MD	ND	ND
Cyclohexanes, 1,1,3-trimethyl	MD	MD	MD	200	ND	160	MD	ND
Cyclohexane, 1,1-dimethyl	KD	KD	MD	MD		MD	KD	ND
yclohexane, 1,3-dimethyl	10D *	MD	MD	KID	ND	MD	NTD.	ND
yclohexanes, 1,3-dimethyl, cis	100	MD	MD	ND		94	ND	120
Cycloheranes, 1,3-dimethyl, trans	1870	ED	100	100		53	ED	100
yrlohexane,1,1,3-rimethyl	1800	MD	150	ETD		150	150	
Cyclohexane, 1, 2-dimethyl, cis	1870	MD	150	1670		150	150	
veloberane, 1, 2-Circuly, trans	150	ED	100	1		-	150	100
Cyclobexane, 1, 5-dimethyl, trans	NTD	MD	150	100		MD	150	
Voloherane, 1, 4-Cimethyl, cis	2	2	150			100	1	
Ovcionerane, i-ethyl-4-methyl cis	12	1	150	1		1	150	
Cyclohexame, I-ethyl-4-methyl trans	150	-	100	-		-	-	
Cycloneranone, 3,3,5-tramethyl	E	Ē	Ē	2	ã	2	KT	39
Cycloomane, buryl	Ē	2	Ē	2	Ē	2	E	2
Cyclopentane, methyl	2	=	E			994	<u>=</u>	=
Cyclopentane, 1, 3-dimethyl, trans	E	E						Ē
	I	_	. 10	152	1	100	100	

J2 = Estimated concentration due to TRSD for response factor in initial calibration higher than 30% J3 = Estimated concentration due to greater than 25% difference between RF for initial calibration and RF for continuing calibration MD = Not Detectable SMD1 = Below Minimum Detection Limits UT = Estimated quantitation limit 16.4ug/KS UUE = Estimated quantitation limit 16.5ug/KS UUE = Estimated quantitation limit 11.0ug/1

TABLE 7 (CONTINUED) SUMMARY OF AREA C CHEMICAL ANALYSIS RESULTS

Sample #	M1194	M1195	M1203	M1205	M1206	M1207	M1208	M1217
	uq/kq	uq/kq	ug/kg	ug/kg	The state of the s	uq/kq	ug/kg	ug/1
	8-Apr	28-Apr	06-May		06-May		28-Apr	
	0-18"	18-36"		UG-MAY	17.5-19	0-18"		21-00)
sepa.			3-5	13-12	17.5-19	0−10	18-36"	
Composite/Discrete	D	D	D	D	D	C	- c	1
Soil (S)/Water (W)/Sediment (X)	8	8	S	S	` S	. 8	5	
VOLATILE ORGANICS ADDITIONAL PEAKS (SEMI-QUANT	ITATIV	E) CONTI	NUED			3 %		
dimethyl cyclohexane	ND	ND	179	ND	MD	ND	ND	NI
Dimethyl cyclopentane	ND	ND	218	ND	ND.	ND	ND	N
Dimethyl-3-hexene	ND	ND	412	ND	ND	ND	ND	N
Ethane, 1,1'-oxybis	ND	ND	MD	ND	ND	ND	ND	1:
Ethyl-methyl benzene	ND	MD	ND	ND	, MD	ND	ND	2
Heptane, methyl	ND	ND	ND	ND	MD	115	ND	N
Hydrocarbons	ND	. ND	ND	ND	ND	ND	13,000	N
Hethyl cyclohexane	ND	ND	2,078	ND	-	ND	ND	N
m-Xylenes	ND	ND	ND	MD		ND	1,010,000	N
	MD	ND	ND	ND	-	ND	769,000	N
OLp-Xylenes	ND	MD	· ND	MD		ND	ND ND	N
Pentane, 3-methyl	MD	MD	ND	MD		9,550	ND	N
Pentanes, methyl	ND	ND	MD	ND		ND ND		
Propyl benzene	ND		Contract of the Contract of th				187,000	N
Kylenes	ND	ND	7,105	91	1,535	ND	ND	32
ACID EXTRACTABLES							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
PRIORITY POLLUTANTS	· • · ,							
2-Chlorophenol	ND	ND	ND	MD	MD	MD	ND	N
2.4-Dichlorophenol	ND	ND	ND	MD		ND	ND	N
2,4-Dieniorophenol	- ED	HD.	188,000	79,900	11,500	MD	3,600	96
Pentachlorophenol /	ND	MD	MD	MD	The second second	ND	(1,000) N
Phenol	ND	MD	27,700	38,900	750	ND		87
2,4,6-Trichlorophenol	MD	ND	MD	MO	_	MD	650) 8
Totals	0	0	215,700	138,800	12.250	0	22,850	1,73
BASE/NEUTRAL EXTRACTABLES						- 15		
PRIORITY POLLUTANTS	(c)							
Acenaphthene	ED	ND	BOIL.	19,600) ED	ND	KID	9.
Acenaphthylene	MD	MED	ND	E		250		-
Anthracene	ND	MD	BMDL			140		
Benzo(a)anthracene	ND	ND	Bette.	16,800		500		_
Benzo(a)pyrene	ND	ND	10,100	11.000		994	-	_
		_	MD	MI.		1.200		_
Benro (h) fi moranthene	, MATO					2,200	242	
Benzo(b)fluoranthene	ND	MD			350	200	200	
Benzo(b)fluoranthene Benzo(ghi)perylene	10	ED	POT.	- DAGE		895	The second secon	
Benzo(b)fluoranthene Benzo(ghi)perylene bis(2-Ethylhexyl)phthalate	4,100	1,700	61,700	- 2000	1,500	4,620	411,000	
Benzo(b)fluoranthene Benzo(ghi)perylene	10	ED	POT.	- DAGE	1,500		26,500	, B

TABLE 7 (CONTINUED)

	A 12 4 5 5 5 1				V6.5 - V - 0	- P. L.		
Sample #	M1194	M1195	M1203	M1205	M1206	M1207	M1208	M121
Units	ug/kg	ug/kg	uq/kq	ug/kg	ug/kg	ug/kg	ug/kg	uq/
Date of Submission	28-Apr	28-Apr	06-May	06-May	06-May	28-Apr	28-Apr	27-Ma
Depth	0-18"	18-36"	3-5		17.5-19	0-18"	18-36"	8
Composite/Discrete	D	D	D	D	D	C	C	4. 7.
Soil (S)/Water (W)/Sediment (X)	S	5	5	S	8	8	5	
BASE/NEUTRAL EXTRACTABLES, PRIORITY POLLUTA	NTS CONTI	NUED				•		
Oibenzo(a,h)anthracene	ND	ND	ND	BMDI.	MD	140	ND	N
.4-Dichlorobenzene	ND	ND	ND	ND	MD	ND	_ND	N
Diethyl phthalate -	ND	ND	ND	ND	ND	- ND	(11,500	
Dimethyl phthalate -	ND	ND	- ND	ND	ND	ND	22,000	
Di-n-butyl phthalate	MD	ND	11,300	45,300	480	96	87,900	
.6-Dinitrotoluene	ND	ND	ND.	ND	ND	MD	ND	N
Di-n-octyl phthalate -	ND	ND	ND	ND	ND	ND	J5,700	
Pluoranthene /	ND	MD	12,200	32,000	630	460	3,400	N
Fluorene -	ND	ND	BMDL	19,300	360	MD	2.800	
Indeno(1,2,3-c,d)pyrene	MD	ND	BMDL	BMDL	280	640	ND	
Leophorone	ND	ND	ND		ND	260	ND	
Saphthalene /	MD	· ND	44,700	13,700		240	179,000	
-Nitrosodiphenylamine	ND	MD	MD	ND.	ND	ND	ND	
henanthrene —	ND	ND	18,900	48,400	1.150	430	8.180	
Pyrene	ND	ND	11,700	25, 300	530	894	4,700	_
.2.4-Trichlorobenzene	, MD	MD	ND	ND	MD	MD	6,200	
Totals		-1.700	170,600	246,700	8,390	.12,539	778,880	3
MASE/NEUTRAL/ACID EXTRACTABLES, ADDITIONAL	PEAKS (SI	MI-QUANT	TITATIVE)				
H-Indene octahydro 2,2,4,4,7,7-hexamethyl	MD	ND	MD	MD	150	100	ND	
H-Benzo(b) fluorene	MD	MD	MD	MD	MD	300	MD	
H-Indene, 2, 3-dihydro	MD	ND	ND	ND	ED	ED	2,250	
H-Inden-5-ol, 2, 3-dihydro	ND	ND	19,700	MD	MD	MD	MD	1
,1'-Biphenyl	MD	ND	MD	MD	ND	ND	MD	1
,2,3,4-Tetramethyl benzene	MD	ND	MD	MD	MD	ND	300	
,2,3-Trimethyl benzene	ND	ND	MD	ND	ND.	ND	- MD	0 0
-Methyl anthracene	ND	ND	ND	MD	MD	MD	MD	k 71
,6-Dimethyl nonane	ND	ND	MD	MD	MD	MD	MD	. 1
-Ethyl hexanoic	MD	MD	ND	1800	1900	MD	NO.	
-Ethyl naphthalene	MD	MD	MD	ETD	MD	NO.	M	Kris i S
-hydroxy benzaldehyde	MD	100	MD	HID	100	100	100	0 - 0
-methyl 1,1'-biphenyl	1970	MD			100	MD	NU	1 1
-Methyl anthracenes	NO.	1970			MD	NO.	MI	
-Hethyl naphthalene	1970	1800			-	MD	MI	, 1
-Hethyl phenanthrene	150	1870	ND	-		MD	160	
-sethyl phenol	150	120			_		NT.	
	1,500						K7	
2-Propendic acid, 2-Methyl, Dodecyl ester	100	ND.			, 2	100	×	

TABLE 7 (CONTINUED) SUMMARY OF AREA C CHEMICAL ANALYSIS RESULTS

Sample # Units Date of Submission	M1194 ug/kg 28-Apr	M1195 ug/kg 26-Apr	M1203 ug/kg 06-May	ug/kg 06-May	M1206 ug/kg 06-May	M1207 ug/kg 26-Apr	M1208 ug/kg 26-Apr	M1217 ug/1 27-May
Depth	6-18"	18-36"	3-5'		17.5-19	0-18"	18-36"	
Composite/Discrete Soil (S)/Water (W)/Sediment (X)	D 5	D S	S	D S	8	· S	5	, W
BASE/NEUTRAL/ACID EXTRACTIBLES, ADDITIONA	L PEAKS (SI	MI-QUANT	TATIVE)	CONTINU	IED			
3-Ethyl-2-Methyl heptane	ND	ND	ND	ND	ND	- ND	ND	ND
3-Methyl phenanthrene	ND.	ND	ND	ND	ND	ND	ND	. ND
3-Methyl phenol	.ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl phenols	ND	ND	ND	ND	ND	ND	ND	ND
Alkanes	2,870	ND	53,000	ND	937	MD	2,790	ND
Benzenesulfonamide, 4-methyl	ND	. ND	ND	MD	MD	ND	ND	MD
Bicyclo(3,2,1)oct-2-ene,3-methyl-4-methyl	ene ND	MD	ND	ND	ND	ND	2,870	ND
Cyclohexane, pentyl	ND	ND	ND	MD	ND	ND	ND	ND
Diethyl benzene	ND	MD	ND	MD	ND	ND	2,560	ND
Dimethyl 2-pentenes	ND	ND	ND	ND	ND	ND	· ND	MD
Dimethyl ethyl phenol	MD	ND	MD	1,400	ND	ND	, ND	ND
Dimethyl heptane	1,830	MD	MD	MD	ND	MD	ND	ND
Dimethyl naphthalenes	ND	ND	MD	ND	ND	ND	ND	MD
Dimethyl pentenes	ND	165,770	MD	MD	ND	ND	ND	ND
Dimethyl phenanthrenes	ND	ND	MD	ND	MD	ND	MD	MD
Dimethyl phenols	ND	MD	6,860	1,090	6,019	ND	ND	ND
Dimethyl-ethyl benzenes	ND	ND	29,000	ND	ND	MD	MD	ND
Dimethyl-ethyl phenol	ND	ND	ND	ND	MD	ND	ND	ND
Ethanone, 1-(4-ethyl phenyl)-ethyl	ND	ND	ND	21,210	ND	ND	ND	ND
Ethyl benzenes	ND	ND	ND	ND	MD	270	2,450	ND
Ethyl methyl benzene	MD	MD	MD	ND	MD	MD	16,730	ND
Ethyl naphthalene	ND	ND	ND	ND	MD	ND	ND	ND
Ethyl phenols	ND	ND	6,890	11,410	ND	MD	ND	
Ethyl- methyl benzenes	KD	ND	ND	ND	MD	ND	10,770	ND
Ethyl-1,2,3-trimethyl benzene	ND	ND	MD	MD	ND	. ND	1,980	
Ethyl-1,2,4-trimethyl benzene	ND	ND.	ND	. ND	, ND	ND	ND	ND
Ethyl-dimethyl benzenes	MD	ND	MD	MD	ND	ND	16,100	ND
Ethyl-methyl benzenes	ED	MD	299,300	MD	3,290	315	M	MD
Ethyl-methyl phenols	MID	MD	17,880	16,280	4,210	ND	MO	KD
Ethyl-propyl benzene	ND.	ND	35,100	MD	ED	ND	M	MD
Bexadecapoic acid	ND	MD	MD	MD	100	ND	MD	ED
Seranal	ND	MD	MD	ED)	- 500	ED	IT.	ND.
Bydrory benzaldehyde	M	15D	100	ED	MD	ND	ET	100
Methory benzaldehyde	ED	MD	. ED	MD	, MD		NO	1
Herthyl benzenes	13,280	11,920	100	MD	SED.	1,585	7,780	100
Methyl ethyl benzene	ND	ND	100	ED	ND	ED	2,375	ND.
Methyl Fluorenes	1800	ED	150	NET D	1	ND.	KI	
Methyl naphthalene	NO		_	100	1,190	10	KI	
Methyl phenanthrene	E	_	=	K		2	K	
Methyl phenols	150					E	- INT	
Methyl-ethyl benzene	150			E.		E	E	

TARLE 7 (CHIMITALE)

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Sample f	4	11114	111195	111 203	111205	111206	11207	1117110	1171
thi te		HO/RO	uo/ko	uo/kg	uo/ko	ug/ko	00/to	112145	119/
hate of Sulmission .		2F-Am	2B-ADI	DE-May	06-Hay	DE-HAY	79-APT	75-ATT 2	7-tin
Dept li		0-1H-	1P-36"	3-5		17.5-19	0-1P.	16-36"	
Composite/Discrete		2	P	n	D	D			
Soil (S)/Water (W)/Sediment (X)		Б	8	*	8	F	F		
MASE/MEUTRAL/ACID EXTRACTIBLES. ADD	TIONAL	PEAKS (SEI)	1-QUANT	ITATIVE)	CONTINU	En			0
methyl-ethyl phenole		ND	ND	2. ORO	NO	918	1857	1111	**
tethyl-methyl ethyl phennis		MIT	1017	MI	3,970	NI	110	me	
lethyl-methyl-ethyl tenzenes		ND	ND	ND	411.	606	Ser.	1.750	
et by I - napht ha Lene		. WD	ND	ND	1119	ND	- 1110	in	
pthyl-propyl benzenes		ND	MIT	MI	1100	Nt	1117	4. Pn5	
aphit balene, decabydro, trans		MD	ND	ND	. trp	8211	1215	1112	-
-propy! benzamide		1413	, NO	ND	ND	. MI	111)	1112	1
hosphoric acid, triplienyl ester		ND	1810	ND	2. 890	1017	MI	11E	-
ropyl tenzener		ND	MD	Mn	1712	#1 7	ND -	4,700	
et rach lorohipheny ls		NI	ND	WD	177)	MID	927	WD	*
etradecanoic acid		NI	1410	PPTO	ND	110	6113	. PIE	
etramethyl benzenen		111)	NID	57,700	8370	ND	. 7117	4.350	1
etramethyl butyl phenols		ND	MD	MD.	ND	ND.	1417	111,	,
richlonethene		MD	1.530	MD.	ND	ND	WD	MD	. 1
rimethy) benzenes		ND	ND	* ND	ND	ND	491	20.410	1
rimethy) naphthalenes		MD	MD	WD	ND	101)	100	HD	
rimethyl phenole		WD	ND	2.590	2.900	2.490	ND	IID	1
(ylenex		WD	WD	98,900	9.370	1.050	740	26,000	- 1
PER									
PRIORITY POLISTANTS			-	ND		110	WD	m	
rocler 1242		500 J1	79 ·	J1 100	ND ND	1.10031	5. 300 31	50. ppnJ	1
rocinr 1254			79		ND				
Totale		500 31	79	J1 0	. 0	1,100	5.300 31	50. mm	
HETALS					12.55				
INITS		eo/ke	mg/kg	₩g/kç	mg/kg	⇒g/kg	œg/ko	ma/ka	110
PRIORITY FOLIATANTS			100	72.00	No.	100	- 12		
ationy.		0.90	0-20	19.00	· ME	ME	5.20	6.70	2.
reenic		4.50	3.70	11.00	5.90	1.30	14.00	7.70	2.
ervllimm		0.16	0.14	ME	ME	ML	C.32	E.49	
			SIL	C. 2E	MIL	112	9.97	12	
admi um		C.49							2:
admi um		19	9.90	3.30	1.10	ME	135	360	
admion browion		19	9.90	3.30	1.60	ME	250	250	€.
admitte browing:		19 29 43	9.90 23 43	3.30 4.80 2.760	1.60	. 55 TM	1.060	1,900	6.
admium hrowium opper end		19 29 43 6.39	9.90	3.30	1.60 350 1.90	ME	250 1.060 2.00	1.900	6.
admium hromium creer end hercury lickel		19 29 43	9.90 23 43	3.30 4.80 2.760	1.60	0.05 90 90	1.060	1,900	6.

JI . Estimated Concentration. Samples were reextracted nest holding time limits as specified in onest non-the

TABLE 7 SUMMARY OF AREA C CHEMICAL ANALYSIS RESULTS

Annual Control of the								
Sample #	M1194	M1195	M1203	M1205	M1206	F1207	1:120E	M1217
Units	28-Apr 0-18	28-Apr 18-36"	06-May 3-5	ug/kg 06-May 13-15	ug/kg 06-May 17.5-19	26-Apr 0-18"	26-Apr 16-36	ug/1 27-May
Date of Submission								
Depth								
Composite/Discrete Soil (S)/Water (W)/Sediment (X)	D	D	D	D	D	ç	C S	1
SOLI (S//METEL (M//SEGIMENT (X)			D					
METALS, PRIORITY POLLUTANTS CONTINUED							w	
UNITS	mg/kg	mg/kg	mg/kg	mg/ka	mg/kg	≥ g/kg	suċ/kċ	uo/L
Silver	0.18	0.11	ND	ND	ND	1.10	0.99	ND
Thallium	0.43	2.30	ND	ND	ND	0.33	0.33	NE
Zinc	- 67	49	18.00	3.70	ND	705	2.200	69.00
Totals	172	137	2,822	365	91	2,213	4.898	106
PESTICIDES	***************************************							
PRIORITY POLLUTANTS				77				
Beta-BHC	ND.	ND	ND	. ND	ND	MD	ND	
4.4'-DDE	ND	ND	ND	ND	MD	- ND	ND	ND
4,4'-DDD	MD.	ND	ND	ND	- ND	ND	HD	. ND
Endosulfan sulfate	ND	ND	. ND	ND	. ND	ND	ND	ND
Endrin aldehyde	MD	ND	ND	MD	ND	ND	ND	. ND
Totals	0	. 0	. 0	. 0	0	0	. 0	0
PHENOLICS & CYANIDE			, 18 m.					
Units	■g/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
Phenolics, Total	0.11	0.12	0.40	1700	0.30	0.62	0.47	16.30
Cyanide, Total	1.80	0.69	0.90	0.50	<.05	2.60	8.80	0.08

andomness of these results indicates that the current size operations not be the major source of contamination. Previous land-use (see on 2.4) activities may have been caused by subsurface contamination was then covered with fill of questionable cleanliness. This makes it sible to discern target-to-source relationships or to infer that conation is defined by the existing boundaries of Bayonne Barrel and Drum.

Area C

oil samples in Area C, as in Areas A and B, had concentrations that d the BISE cleanup criteria for volatile organic, heavy metals and plus high levels of acid extractable organics, phenolics, and a ty of base/neutral organics. See Table 7 and Figure 4 for the results e analyses.

site sample M1208 (18-36") had the highest level of VOAs with a total ntration of 2,351.7 mg/kg, whereas M1207 (0-18") had less than 12 mg/kg. results include the non-priority pollutant VOAs.

hree soil samples from monitoring well #2 (M1203, M1205 and M1206) had total VOAs exceeding the 1 mg/kg cleanup level. The 3-5' sample 13) had 11 mg/kg, while the samples from 13-15' and 17.5-19' had VOA concentrations of only 1-2 mg/kg. All three samples from well #2 had high acid extractable organic concentrations that decreased with 1. The two main parameters were 2, 4-dimethylphenol and phenol, while phenolics in sample 1205 (13-15') measured at 1,700 mg/kg.

metal concentrations in the first two soil samples from monitoring #2 exceeded BISE cleanup levels for lead and mercury. The lead conation was significantly less for the 13 to 15 foot sample (M1205) than the 3 to 5 foot layer (M1203) and both lead and mercury totally absent the 17.5 to 19 foot sample (M1206). The mercury concentrations were significantly different from sample M1203 (1.3 mg/kg) to sample M1205 mg/kg).

composite soil samples (M1207/M1208) had excessive levels of cadmium, nium, copper, mercury, lead and zinc. Lead concentrations ranged from 20 times the cleanup level of 100 mg/kg. In contast to the monitor-vell soil samples the composite samples had higher metal concentrations to lower sample interval (18-36 inches) than for the surface soil le (0-18 inches). Though both composite samples are above the upper-monitoring well soil sample. Since compositing does not allow for ting a specific sample to a contaminant source it can be safely produthat like the rest of the site, metal contamination is from leaching the ash pile and runoff from the drum storage area.

netal contamination does not appear to have migrated below the water e to any great extent but not enough evidence is available to discern a entration decrease with depth relationship. As groundwater on the site did not possess excessive levels of metals it can be inferred that the metals are tightly bound to the sediment under existing pH and redox (reduction/oxidation) conditions.

Base/neutral organic concentrations were equally as high as elsewhere in the study area, but with some differences. The phthalates especially bis(2-ethyhexyl)phthalate, were greater than 6 mg/kg in sample M1203 (3'-5'), not detectable in sample M1205 (13'-15'), but at 17.5'-19 their concentration rose to 1.5 mg/kg. Also for the composite samples M1207/M1208, the upper composite (0-18") has a bis(2ethylhexyl) phthalate concentration of 4.6 mg/kg and a lower composite (18-36") concentration of 411 mg/kg.

Discrete samples M1194/M1195 were conspicuously void of high concentrations of contaminants found in the other Area C samples. Except possibly for the base/ neutral organic, methyl benzene, there were no other contaminant levels of concern even heavy metals. Samples M1194/M1195 were obtained farther south than any other discrete samples, and are upgradient from both the ash and tire piles and the runoff from the drum storage area.

PCBs exceeded clean-up levels for both the upper and lower depth intervals of composite samples M1207/M1208, with the lower sample being almost ten times higher in concentration than the upper (50 mg/kg vs. 5.3 mg/kg).

4.2 Groundwater

The water samples collected on May 27, 1986 from monitoring well #2 and 3 were analyzed for Full Priority Pollutants Plus Forty. The BISE cleanup levels for groundwater, as presented in Table 4, are much stricter than for soil. This is because mobility for off-site contamination is much greater for groundwater than for soil, and the pathways for the water's uptake by fauna and flora, is more efficient.

Area A

Monitoring well #3 in Area A does not exceed the cleanup levels for any parameter.

Area B

There was no monitoring well located in Area B.

Area C

The results of monitoring well #2 are in sharp contrast to those of monitoring well #3. The #2 contained excessive levels of volatile organics, acid extractable organics, and total phenolics. The volatile organic fraction was derived mainly from xylene; 4-methyl, 2-pentanone; and toluene, all of which are solvents in industrial applications and components in the

refinery of petroleum products. Taking the additional non-priority pollutant peaks into consideration greatly increases the total concentration of volatiles. The total concentration of both priority and nonpriority pollutants was over 98 ug/l, far in excess of the 10 ug/l cleanup level.

The total acid extractable organics concentration was 1,737 ug/l, with 2,4-dimethylphenol and phenol being the only contributors. Again, this far exceeds the cleanup level of 50 ug/l.

Total phenolics which is measured by a different method than for acid extractable phenols, was 16.3 mg/l. The criteria for this compound and most of the heavy metals and pesticides is established by the Bureau of Groundwater Quality Management in N.J.A.C. 7:9-6(c) and are presented in Table 4.

The groundwater quality criteria are applicable to the groundwater of the study area because the total dissolved solids concentration is between 500 mg/l and 10,000 mg/l, which is the main criteria for classifying groundwater. Conductivity measurements listed in Table 3 indicate total dissolved solid concentrations in this range. The Brunswick Shale is the primary aquifer underlying the site and has been subjected to a wide variety of contamination from industrial sources, infiltration of urban runoff, salt-water intrusion and reductions in recharge. Additionally, the Passaic River has also been subjected to upgradient sources of contamination that infiltrates the Brunswick Shale Aquifer and also receives discharge from the aquifer due to tidal affects. This pervasive pollution may result in the BISE deciding not to subject this portion of the aquifer to the cleanup guidelines listed in Table 4. No formal declaration of such an exclusion has been made public at the time of writing.

The results of the groundwater analyses do not exhibit pervasive on-site contamination. Monitoring well #3 is uncontaminated while monitoring well #2 has fairly high concentrations of phenolic compounds and volatile organics. This indicates that the sources of contamination are upgradient of monitoring well #2, (i.e., the old ash pile, drum storage area, tire pile, and other off-site sources) and that groundwater flows generally eastward instead of northeastward. Monitoring wells #2 and #3 had very similar water levels (3.67 and 3.72 feet, respectively), which made it impossible to delineate a hydraulic gradient, especially since the data has not been corrected for tidal influences. A larger number of measurements needs to be made during low and high tides to correct for tidal affects. If measurements indicate the same hydraulic heads (water levels), then it is likely that groundwater passing through monitoring well #2 does not flow near monitoring well #3.

It is also apparent that many of the pollutants in the soils have not mobilized to the groundwater, especially the base/neutral extractable organics, heavy metals and PCB fractions. Volatile organics, being a mobile group of chemicals, are detected in the groundwater but not nearly at the levels found in the soil. The reason for this may be that the more mobile, water soluble constituents have already been flushed out of the soil, as the contamination has been deposited there over many years. The less water soluble substances, such as the base/neutral extractables and PCBs are not

mobile and have partition coefficients that do not permit phase changes from soil to water at any discernable concentration. The immiscible (insoluble in water) chemicals are more tightly bound to the sediment where they accumulate over time at high concentrations. As previously mentioned in Section 4.1 the metals also appear tightly bound to the sediment and not mobilizing into the water column.

The contamination found in the lower soil layers (below the surface) indicates that historical sources are a major contributor, and that the low levels found in the groundwater are not due to the lack of time needed for the above ground sources of contamination (drums, storage tanks, ash pile) to leach to the water table. This does not necessarily reduce the magnitude of existing on-site sources, but it does express the need for a more regional and historical explanation of the contamination.

SUBJECT

Bayonne Barrel and Drum RCRA Sampling Results (NJD009871401)

Louis DiGuardia, Geologist L.D. h.l. 3/16/4
Source Monitoring Section

FROM:

William K. Sawyer, Attorney Waste and Toxic Substances Branch

Thru: John Ciancia, Chief

Source Monitoring Section

Richard D. Spear, Chief Surveillance and Monitoring Branch

On February 17, 1984 a RCRA sampling survey was conducted at Bayonne Barrel and Drum by Joseph Cosentino, Karen Egnot, Steven Hale, Brian Kovak and myself. This survey was conducted at the request of the Waste and Toxic Substances Branch to determine if any actions were taken by Bayonne Barrel and Drum in order to comply with the complaint and compliance order issued May 20, 1982.

The facility located at 150 Raymond Boulevard in Newark, New Jersey was formerly in the business of cleaning and reconditioning dirty and damaged drums. The facility encompasses an area of approximately 20 acres. At the time of the inspection, operations had ceased and the company had filed for bankrupcy.

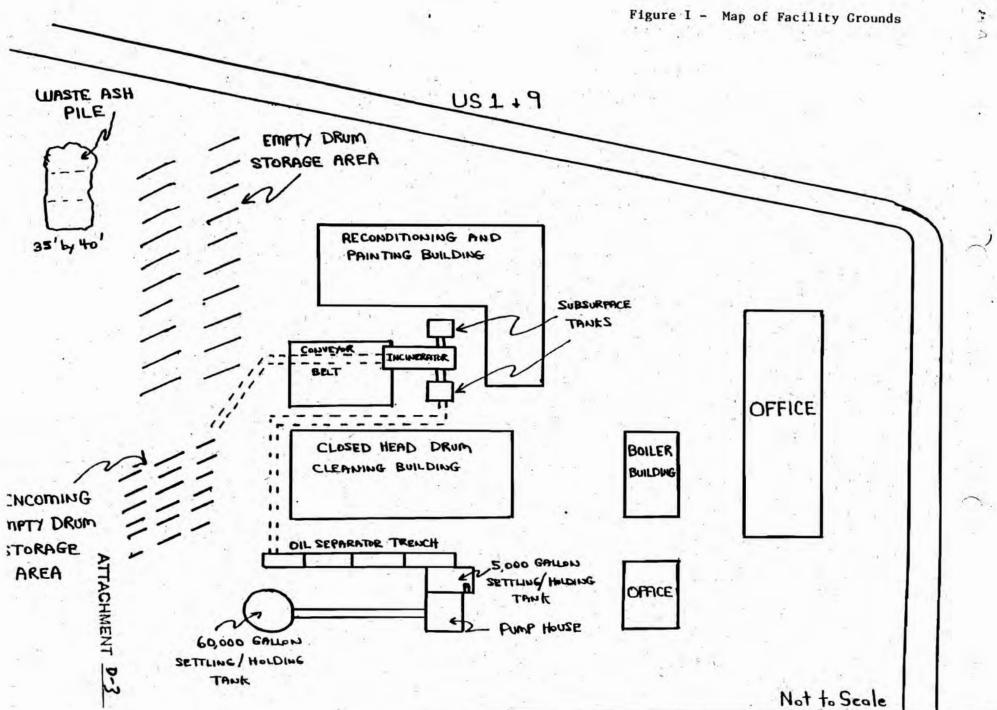
Drum cleaning operations formerly involved both closed head and open head drums. In closed head cleaning, chains and a caustic solution were used to wash out previous material in the drums. The spent solution drained through an oil-water separator into a 5,000 gallon under ground holding/settling tank and was then pumped into a 60,000 gallon above ground holding/settling tank. The liquid was decanted to the sewer under a permit to the Passaic Valley Sewage Commission. Open head drums were placed on a conveyor belt and moved through an incinerator which burned residue out of the inside. This residue material was collected in two subsurface holding/settling tanks. Approximately 40,000 lbs of incinerator ash and sludge was generated monthly.

Samples were taken from the following areas of concern:

1) Under ground 5,000 gallon holding/settling tank

Sampling #65189 - aqueous sample collected from the tank.

Sampling #65190 - composite soil sample collected from the area around the tank.





Etate of New Jersey DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF WATER RESOURCES

CN 029 TRENTON, NEW JERSEY 08625

GEORGE G. McCANN, P.E. DIRECTOR DIRK C. HOFMAN, P.E. DEPUTY DIRECTOR

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Frank Langella 154 Raymond Blvd. Newark, NJ 07105

FEB 1 1 1986

Dear Permittee:

Re: 15E Sanitary Landfill (Formerly Multiplex Cinema)
NJPDES Permit No. NJ0064068

Enclosed is the final New Jersey Pollutant Discharge Elimination System (NJPDES)/Discharge to Ground Water Permit Major Modification to discharge pollutants to the ground waters of the State, issued in accordance with the New Jersey Pollutant Discharge Elimination System Regulations, N.J.A.C. 7:14A-1 et seg. Violation of any condition of this permit may subject you to significant penalties.

The following represents the Department of Environmental Protection's (Department) response to comments submitted to the Department during the public comment period for the draft NJPDES Major Modification.

- A. COMMENTS SUBMITTED TO THE DEPARTMENT ON JULY 1, 1987 BY REPRESENTATIVES FOR NATIONAL AMUSEMENTS
- 1. <u>COMMENT</u>: The commenter requested that a plenary administrative hearing be conducted prior to the Department's taking final action regarding this permit.

<u>RESPONSE</u>: In accordance with N.J.A.C. 7:14A-8.9, an adjudicatory hearing may be requested within 30 calendar days following the service of notice of the Department's issuance of a final draft permit, discharge allocation certificate, or final permit. The request for a plenary administrative hearing on the draft major modification is therefore inappropriate and is denied.

2. COMMENT: The commenter states that his client never operated

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BBA600039

ATTACHMENT I-1

a landfill or conducted landfilling activities at the site. Any landfilling that took place on the site occurred decades prior to his client's purchase of the property. National amusements had no knowledge of the landfill operations when they purchased the property.

RESPONSE: In accordance with N.J.A.C. 7:14A-1.2(e)10, the Department may issue permits under the NJPDES permit program for discharges from operating and non-operating sanitary landfills. The Department has determined that a NJPDES discharge to ground water permit shall be issued to the operator of a landfill if it is active, and to the property owner if the landfill has ceased operations. Since the 15E landfill has ceased operations, the property owners are the proper permittees. In accordance with N.J.A.C. 7:14A-2.1(b), a person who currently owns any part of a facility which include an activity regulated pursuant to subchapter of the NJPDES regulations shall obtain a NJPDES permit.

3. <u>COMMENT</u>: There is no statutory authority for the Department to require National Amusements to undertake a joint monitoring program with other permittees, which may require installation of monitor wells on property owned by other permittees. The program is unreasonable and unwarranted; its requirements violate State and Federal Constitutional provisions, including, but not limited to due process and equal protection. It also constitutes an unconstitutional "taking" of property without just compensation.

RESPONSE: Pursuant to N.J.A.C. 7:14A-2.1(b) and (c), a person who currently owns any part of a facility which includes an activity regulated pursuant to subchapter 2 of the NJPDES regulations shall obtain a NJPDES permit. Whenever more than one person is required to obtain a NJPDES permit for one or more activities at a specific site, the Department shall issue a single permit which lists all these persons as permittees. It is the responsibility of the permittees to coordinate implementation of the permit requirements in order to remain in compliance with the permit conditions.

- B. COMMENTS SUBMITTED TO THE DEPARTMENT ON AUGUST 7, 1987, ON BEHALF OF JOMAN REALTY COMPANY, BAYONNE BARREL AND DRUM COMPANY, AND MR. FRANK LANGELLA.
- 1. <u>COMMENT</u>: The Department appears to have very little information about this site. It is incumbent upon the Department to establish the existence of a landfill and its exact boundaries before the issuance of any permits.

<u>RESPONSE</u>: Soil boring descriptions submitted to the Department on behalf of National Amusements as part of their disruption permit application package show that fill material underlies the portion of the site owned by National Amusements.

A December, 1986 report entitled "Preliminary Site Investigations: New Jersey Turnpike 1985-90 Widening From

Passaic River to Milepost 105", was prepared by Louis Berger & Associates, Incorporated and submitted to the New Jersey Turnpike Authority. This report used remote sensing techniques to delineate historical (1934-1985) sources of possible contamination along a portion of the New Jersey Turnpike. This report showed that a landfilling operation took place at the 15E sanitary landfill site within the boundaries shown on Attachment One of the NJPDES Draft Major Modification between the years 1934 and 1947. On March 19, 1987, Geologist Erick Kinsel of the Department reviewed historical aerial photographs of the site in question. His findings support the limits of the landfill as shown on Attachment One of the permit.

2. <u>COMMENT</u>: The commenter asserts that the current property owners are the inappropriate permittees, as no current property owner of the site has ever engaged in the business of solid waste collection or disposal on the site. The proper permittee would be the entity which operated this landfill facility.

RESPONSE: See response to comment A.2.

3. <u>COMMENT</u>: Citing portions of the Water Pollution Control Act, N.J.S.A, 58:10A-1 et seq., the commenter asserts that a permit can be required only when there is evidence that a discharge is in fact occurring. As a review of the Department's files showed no evidence that leachate is entering the ground water at the site, the permit has no legal or factual basis for its issuance and should be withdrawn.

RESPONSE: According to N.J.A.C. 7:14A-6.1(a)1, a NJPDES Discharge to Ground Water permit is required:

"for all discharges, past or present, actual or potential, of pollutants, including hazardous and non-hazardous waste as defined in N.J.A.C. 7:14-1.9, to groundwater or onto land which might flow or drain into the waters of the State" (emphasis supplied).

By their existence, landfills have the potential to degrade the ground and surface waters of the State. Therefore, all landfills require ground water monitoring in accordance with the NJPDES regulations. N.J.A.C. 7:14A-1.2(e)10 requires that a NJPDES permit be issued for discharges from operating and non-operating sanitary landfills.

Furthermore, N.J.A.C. 7:14A-10.12(e)2 viii states that ground water monitoring wells are required for detection of ground water contamination from landfill leachate.

4. <u>COMMENT</u>: The cover letter accompanying the draft permit indicates that each of the individuals or entities receiving the permit is jointly and severally responsible for conduct of the entire monitoring program. Assuming that the permit is properly issued in the first instance, each permittee can legally be responsible only for monitoring activities pertaining to its

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PERMIT NUMBER NJ0064068

Permittee
MULTIPLE PERMITTEES
SEE BELOW

Co-Permittee

Property Owner
MULTIPLE PROPERTY OWNERS
SEE LIST BELOW

Location of Activity
15E SANITARY LANDFILL
ROUTE 1 AND FOUNDRY STREET
NEWARK, NJ

Type of Permit Covered Issuance Effective Expiration
By This Approval Date Date

F:Landfill - Ind/Comm.Waste 2/15/88 3/15/88 2/28/90

PERMITTEES

NJPDESNJPDESNJPDESNJPDESNJPDESNJPDESNJPDESNJPDESNJPDESNJPDESNJPDESNJPDESNJPDESNJPDESNJPDESNJP

- 1. Bayonne Barrel & Drum Co.
- 2. Edle Realty, Inc.
- 3. The Joman Realty Co.
- 4.Mr. Frank Langella
- 5.NJ Turnpike Authority

PROPERTY OWNERS

- 1. Bayonne Barrel & Drum Co.
- 2. Edle Realty, Inc.
- 3. The Joman Realty Co.
- 4.Mr. Frank Langella
- 5.NJ Tumpike Authority

This is a Major Modification of an existing NUPDES Permit.

By Authority of: George G. McCann, P.E.

Director

Division of Water Resources

DEP AUTHORIZATION

Arnold Schiffman, Administrator

Water Quality Management

Collins Street Dept. 14 of G. Ledionmenter - Landis.

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(Territ conditors and probable a flicthed

1.Bayonne Barrel & Drum Co. 154 Raymond Blvd. Newark, New Jersey 07105

2.Edle Realty 200 Elm Street Dedham, MA 02116

3.The Joman Realty Co. P.O: Box 480 Wilkes-Barre, PA 18703

4.Mr. Frank Langella 154 Raymond Blvd. Newark, New Jersey 07105

5. New Jersey Turnpike Authority P.O. Box 1121 New Brunswick, New Jersey 08903

ATTACHMENT IS

INVESTIGATION

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INVESTIGATION

CASE # 88-06-30 -1300 DATE: 07-06 88

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Supervisor Signature Investigator Signature

COPIES

White - DWM File

Yellow - Local Health Dept.

Pink - Investigator

INVESTIGATION

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RESPONSIBLE PARTY INVESTIGATION SUMMARY

BAYONNE BARREL AND DRUM CO. 154 RAYMOND BLVD. NEWARK, ESSEX COUNTY, N.J.

Based upon information obtained as part of a Preliminary Assessment dated 10-24-88 (attached) and a responsible party investigation, Bayonne Barrel and Drum Company (BBD) and its principal owner, Mr. Frank Langella, should be considered the primary responsible parties in this case as owner/operator of the site since 1945. BBD operated a drum reconditioning facility at the site from 1945 until about 1982 when the company filed for bankruptcy. Analytical data indicate that substances found in soil and groundwater samples were also detected in samples collected from waste ash/sludge piles and drums present at the site (e.g. cadmium, chromium, copper, lead, benzene, toluene, xylene, ethylbenzene, PCB's).

Property deed records for Essex County indicate a history of site ownership as follows:

Bayonne Barrel and Drum Co.	1945 - present
Colville Brothers Inc.	1933 - 1945
Barbara and Henry Smith	1931 - 1933
B & F Co. Inc.	Before 1931

Historical maps show a drum reconditioning facility at the site as early as 1931, owned by B & F Co., Inc. NJ Department of State records indicate that B & F Co. incorporated in 1931 and dissolved in 1933. Colville Bros. incorporated in 1933 and dissolved in 1945.

Potential responsible parties include the following companies which have leased and/or occupied the site after 1980 according to the following information submitted by BBD to the U.S. Justice Department on 10/2/87:

- Apex Transportation: trucking company which reportedly disposed of waste oil at the site.
- New England Container Co: drum reconditioning company which left an inventory of used drums and may have disposed of wastes from drums at the site.
- Kearny Steel Container Corp: drum reconditioning company which may have disposed of drum wastes at the site.
- 4. Gold Cooperage: drum reconditioning company which brought drums to the site to be reconditioned by BBD and Kearny Steel Container.

A small parcel of land near the northern site boundary is leased to Nationwide Tire Service and contains a pile of used automobile tires, however this company does not appear to be responsible for any of the contamination which has been identified onsite. The U.S. Justice Department has filed a suit against BBD for various violations of RCRA and failure to comply with the terms of the consent agreement signed with EPA in 1984. The case is presently in bankruptcy litigation, United States v. Bayonne Barrel and Drum Co., et al. (Civil Action No. 87-786). Bayonne Barrel and Drum Co. has defaulted on a bank loan with First Fidelity Bank, formerly First National State Bank. First Fidelity has an existing lien against BBD corporate property as well as property owned by Frank Langella. The bank has apparently decided not to foreclose and take title to the subject property because they may be considered a responsible party under CERCLA as owner of the site.

In addition to the soil and groundwater contamination which has been documented at the site, the following items of environmental concern still exist:

- ash piles on ground surface in rear of property and in courtyard area near incinerator and furnace room building.
- approximately 100-150 drums of ash and aqueous materials inside furnace room building.
- oil storage tanks area including a 5,000 underground tank,
 60,000-gallon above-ground tank, and oil separator trench.
- the estimated 30,000 drums stacked in rows in the rear of the property are reportedly empty, however some may contain small amounts of material.

It is recommended that this case be transferred to the Bureau of Case Management - State Program at this time for overall case management responsibilities concerning site remediation.

Submitted By:

Edward Gaven
NJDEP Bureau of Planning and Assessment
65 Prospect Street
Trenton, NJ
609/292-4320
November 21, 1988

PRIMARY RESPONSIBLE PARTY

1. Corporate Name:

Bayonne Barrel and Drum Co.

Address:

154 Raymond Blvd. Newark, N.J. 07105

Registered Agent:

Frank Langella 154 Raymond Blvd. Newark, N.J. 07105

Corporate Status:

Void through proclamation.

Financial Status:

Company filed for bankruptcy in 1982. Property value according to Newark Tax

Assessor is listed as follows:

Block 5002 Lot 3, 5, and 16: land (9.286 acres): \$378,400

\$185,600 \$564,000

Principals:

Frank Langella
President
50 Crest Dr.
South Orange, N.J.
Block 26 Lot 317
Assessed Value (1974): \$92,100

Frank Langella also owns the following property in Newark which is used as part of

the BBD facility.

Block 5002 Lot 14: 1and (5.489 acres)

Assessed value: \$110,000

Notes on Financial Status: The following financial information regarding the above-mentioned properties is reported in U.S. Justice Department case documents, dated June 1986:

- The BBD Corporate Real Estate (Newark Block 5002 Lot 3, 5, 16) had an appraised fair market value of \$1,600,000.
- The Langella Commercial Property (Newark Block 5002 Lot 14) had an appraised fair market value of \$603,000.
- The Langella Premises (South Orange Block 26 Lot 317) had an appraised fair market value of \$465,000.
- Debtor Frank Langella owed to First Fidelity Bank (FFB) \$1,607,189.
- FFB had a lien on the BBD Corporate Real Estate and the Langella Commercial Property and Premises in the amount of \$1,607,189.

Potential Responsible Parties

1. Corporate Name:

Headquarters Address:

Apex Transportation 150 Pacific Avenue

Jersey City, N.J. 201-333-0333

Other Address:

150 Raymond Blvd.

Newark, N.J.

Registered Agent:

John Tsao

150 Raymond Blvd. Newark, N.J.

Corporate Status:

Active, primary SIC code 4212. Apex

Transportation incorporated in New York in 1983 to carry on the business of interstate trucking, transportation of containers, towing, cargo freight contracting, or general

trading. Business is transacted in New Jersey under the name JT General Transport.

Financial Status:

Unknown. No information available in Dun and

Bradstreet financial records.

Principals:

John Tsao

President and Secretary

Address Unknown

In the certificate of incorporation dated 8/9/83, Apex's main office was listed at 195 Flatbush Avenue, Brooklyn, NY. The company is listed in the phone book at this location with the following phone number: (718) 783-0409. A call to this number indicated that the Apex is no longer there. Dun and Bradstreet records indicate an Apex Transportation at the following two addresses in New Jersey: 150 Raymond Blvd. in Newark and 150 Pacific Avenue in Jersey City.

Corporate Name:

New England Container Co., Inc.

Address:

George Washington Highway

Esmond, R.I. 02917

401-231-2100

Registered Agent:

Unknown

Corporate Status:

Active, SIC code 5085. New England Container Co. incorporated in Rhode Island in 1958 and is in the

business of reconditioning steel drums. The company operates at the above location with 75

employees.

Financial Status:

Duns Financial Records indicate recent annual

sales of \$10,000,000.

Principals:

Bernard Buonano, Chairman of the Board

Vincent Buonano, President Richard Costa, Vice President

Linda Frame, Secretary

Thomas Lussier, Vice President - Sales

Corporate Name:

Kearny Steel Container Corp. 401 South St.

Address:

Newark, N.J. 07105

201-589-2070

Registered Agent:

Kearny Steel Container Corp.

401 South St.

Newark, N.J. 07105

201-589-2070

Corporate Status:

Active, primary SIC code 3412. Kearny Steel Container incorporated in 1953 and is in the business of reconditioning steel drums and containers. According to Dun and Bradstreet

records, the company operates a single manufacturing location with 42 employees. The company operated a drum reconditioning facility at the Foot of Bergen Avenue in Kearny until a fire destroyed the plant in 1982. The property was proposed to be sold to J.J. Realty in 1984 and is

currently subject to ECRA regulations.

Financial Status:

Duns Financial Records indicate recent annual sales estimated at \$22,000,000. The company apparently leases at the above address in Newark (397-413 South St., Block 5088 Lot 148, is owned

by Keer Realty).

Principals:

Michael Verzaleno, President

Address Unknown

4. Corporate Name:

Address:

Gold Cooperage

Unknown

Registered Agent:

Jerome Litvak 401 South St.

Newark, N.J. 07018

Corporate Status:

Dissolved. Gold Cooperage incorporated in 1935 to manufacture, buy, sell, refinish, or otherwise deal in barrels, kegs, drums, steel barrels, boxes, and packing devices. The company dissolved

in 1985.

Financial Status:

Unknown

Former Principals:

Sam Gold, President

Isadore Gold, Vice President Milton Gold, Treasurer/Secretary

PRELIMINARY ASSESSMENT

BAYONNE BARREL AND DRUM CO. 154 RAYMOND BLVD. NEWARK, ESSEX COUNTY, N.J. EPA ID # NJD009871401

GENERAL INFORMATION AND SITE HISTORY

Bayonne Barrel and Drum Co. is an inactive facility located in an industrial area of Newark, bordered by Route 1 and 9 to the west, the New Jersey Turnpike to the east, and an empty lot previously occupied by the Newark drive-in movie theater to the south. The site covers approximately 15 acres and consists of three main buildings and a large yard area. Most of the site is in Block 5002 Lot 3 (9.3 acres) and is owned by Bayonne Barrel and Drum Co. Block 5002 Lot 14 (5.5 acres) is owned by Frank Langella, principal owner of BBD, and is used as part of the facility for drum storage.

Bayonne Barrel and Drum Co. operated a drum reconditioning facility at the site from the early 1940's until about 1982 when the company filed for bankruptcy. According to NJ Department of State records, Bayonne Barrel and Drum Co. incorporated in 1937 under the name of Export Barrel Co. The name was changed to Bayonne Barrel and Drum Co. in 1942. Property deed records for Essex County indicate a history of site ownership as follows:

Bayonne Barrel and Drum Co.	1945 - present
Colville Bros. Inc.	1933 - 1945
Barbara and Henry Smith	1931 - 1933
B & F Co. Inc.	Prior to 1931

N.J. Department of State records indicate that B & F Co. incorporated in 1931 and dissolved in 1935; Colville Bros. incorporated in 1933 and dissolved in 1945.

Sanborn fire insurance maps show a drum reconditioning facility at the site as early as 1931, owned by B & F Co. Inc. The buildings present at the site were labeled as "tenant occupied" and included crate and drum storage, and drum cleaning areas. A review of aerial photography was conducted in 1986 by Louis Berger and Associates, a consultant for the N.J. Turnpike Authority which is proposing to construct a right-of-way over a portion of the BBD property. The following areas of potential environmental concern were noted:

- 1947 landfill activity in the southern portion of the site:
 - lagoon near eastern site boundary.
 - drainage channels connecting lagoon to Passaic River.
 - large open storage area containing several thousand drums.
- 1959 N.J. Turnpike construction near eastern site boundary.
 - liquid filled trench near old lagoon location.
 - small waste disposal area in northeast corner of site.
- 1985 dark ground staining along eastern site boundary.
 - large mound of dark material (ash) near western edge of site.
 - lagoon and waste disposal areas no longer evident.

Currently, the site contains several buildings, an incinerator, above-ground and underground storage tanks, an ash/sludge pile and an empty drum storage area (30,000 drums estimated). Since BBD filed for bankruptcy a portion of the site has been leased and used to repair and maintain trailers and cargo containers. A one-acre parcel near the northern boundary is reportedly leased to Nationwide Tire and contains a pile of used automobile tires.

SITE OPERATIONS OF CONCERN

Operations at the BBD facility involved both closed head and open head drums. The closed head system employed chains and caustic solution to remove residues in the drums. Spent solution from the process drained through an oil/water separator trench into a 5,000-gallon underground tank, and then was pumped into a 60,000-gallon above-ground holding/settling tank prior to being discharged to the sewer under a permit with the Passaic Valley Sewage Commission. Open head drums were placed on a conveyer and processed through the incinerator with residue from the process collected in two subsurface holding/settling tanks, and then placed into a dumpster/trailer prior to being manifested off-site.

Past inspections by NJDEP representatives during 1982 and 1984 reported the following items:

- 40,000 pounds per month of incinerator ash and sludge generated at the facility, most of which was being sent to S & W Waste in Kearny, N.J.; a lesser amount was disposed of at GROWS Landfill in Morrisville, Pa.
- wastewater overflow from the 5,000-gallon tank was observed entering a storm sewer as a result of a frozen pump and broken lines to the tank; the storm sewer reportedly flows to a small creek leading to the Passaic River.
- oil staining on ground surface near the above-ground tank.
- ash/sludge material on ground surface around incinerator.
- ash/sludge pile (220' x 50' x 4') on ground in rear of property, uncovered with no containment or runoff control.
- approximately 30,000 drums stacked on ground in rear of property;
 a random survey indicated about half of the drums contained some amount of material.

The ash pile and rows of drums (30,000 estimated) still remain in the rear of the property. The plastic cover over the ash pile is in poor condition, leaving the pile partially uncovered. In addition, a RCRA enforcement inspection conducted by EPA during June 1988 noted a large ash pile and 100-150 drums containing ash and aqueous materials in a building near the incinerator. There is also an ash pile in the courtyard between the incinerator and furnace room building.

A NJPDES-DGW permit (NJ 0064068) was issued to Bayonne Barrel and Drum Co. and several adjacent property owners in order to monitor groundwater in the vicinity of an old landfill area which was reportedly active prior to 1947, known as the 15E sanitary landfill. The landfill covers approximately 45

acres and received construction and demolition debris. It is located in the area between Foundry Street and Raymond Blvd. and encompassed the southern portion of the BBD site and the former drive-in movie theater to the south. The permit was issued 2/15/88 and includes 13 groundwater monitoring wells.

GROUNDWATER ROUTE

A soil and groundwater characterization report for the BBD site was submitted by Dan Raviv Associates in July 1986. The report contains soil and groundwater sampling data and information on site geology and groundwater conditions. Soil and well boring data indicate that the site is underlain by the following materials:

	black coal-cinder fill material:	0-10 feet
	medium to coarse grained sand:	10-40 feet
	dark red-brown coarse silt:	40-50 feet
-	dark red shale (Brunswick Formation):	below 50 feet

Field investigations by Dan Raviv Associates included the installation of four monitoring wells (20-50 feet deep) and one well point (10 feet deep). The monitoring wells included two background locations, one near the ash pile, and one near the oil storage tanks the northeast portion of the site. Groundwater samples were analyzed for volatile organics, petroleum hydrocarbons, and PCB's. The monitoring well near the above-ground tank (downgradient location) was also analyzed for priority pollutants. Depth to groundwater is 3-4 feet and the direction of flow is toward the east.

Sampling data indicate that groundwater beneath the site is contaminated with volatile organics, petroleum hydrocarbons, and PCB's at concentrations significantly above background. The monitoring well near the ash pile showed low level contamination with benzene (28 ppb), napthalene (14 ppb), and di-n-butylphthalate (28 ppb). Groundwater in the northeast portion of the site near the oil storage tanks was found to be contaminated with PCB's (53 ppb), petroleum hydrocarbons (2,000 ppm), toluene (150 ppb), chlorobenzene (67 ppb), ethylbenzene (1,060 ppb), dichlorobenzenes (76 ppb), and various non-priority pollutant organics including cyclohexane (60 ppb), cycloheptane (100 ppb), isopropylbenzene (90 ppb), n-propylbenzene (150 ppb), ethyl toluene isomers (550 ppb), trimethylbenzene isomers (1400 ppb), and xylene isomers (2000 ppb).

A soil and groundwater study was also completed by Louis Berger Associates in 1986 in order to characterize contamination in the proposed NJ Turnpike right-of-way adjacent to the eastern site boundary. Two additional monitoring wells were installed in this area and the results showed contamination with volatile organics (up to 98 ppb), polynuclear aromatic hydrocarbons (34 ppb), phenol (877 ppb), and 2,4-dimethylphenol (860 ppb).

NJDEP water supply overlay and water allocation maps show no major public supply wells within a 3 mile radius of the site. Groundwater in the area is not used for drinking, however there are a number of industrial supply wells on the order of 200-700 feet deep which draw from the Brunswick Formation. Downward migration of contaminants at the BBD site could have an adverse impact on water quality of the Brunswick Formation.

SURFACE WATER ROUTE

The nearest downslope surface water is the Passaic River about 2000 feet to



the east, which empties into the Newark Bay roughly one mile south of the site. Storm sewers at the site reportedly lead to Harrison's Creek and the Passaic River. A NJDEP inspection in 1982 reported wastewater flowing into a storm sewer as a result of equipment malfunctions at the facility. Sample of the wastewater discharge to the storm sewer showed contamination with benzene, toluene, xylene, ethylbenzene, methylene chloride, and 1,1,1-trichloroethane. The Passaic River is used for industrial purposes and occasional recreational boating.

AIR ROUTE

There are no records of air sampling conducted at the site. The facility had 12 air pollution control permits during its operation (plant ID #05103) that included drum cleaning units, paint spray booths and ovens, drum incinerator, baghouses, and a deisel fuel and gasoline tank.

During 1978 the facility was cited for opacity violations which resulted from drums not being emptied properly prior to incineration. Hydrogen sulfide type odors and other strong odors were noted by Louis Berger Associates during work along the eastern portion of the site, and by road workers during construction along Route 1 and 9. The potential for air contamination exists due to the documented volatile organic contamination at the site, however there are other sources of air pollution in the area from adjacent highways and the Newark Airport located about three miles to the south.

SOIL

Field work completed by Dan Raviv Associates included soil samples from 19 soil borings (up to 15 feet deep) and five well borings (up to 42 feet deep). A total of 71 soil samples were analyzed at depths ranging from 0-22 feet for a variety of parameters including total petroleum hydrocarbons, volatile organics, PCB's, and priority pollutant scan. One sample was analyzed for dioxin. The highest levels of soil contamination detected at the site are listed as follows:

22,553	ppb
66,035	ppb
173,000	ppm
320	ppm
	ppm
1300	
3400	ppm
5040	
•	- 66,035 173,000 320 390 1300 3400 15,500 8,400 13.0

Petroleum hydrocarbon concentrations above 100 ppm were detected throughout the site at depths up to ten feet. Volatile organic and PCB contamination was detected in the oil storage tanks area, drum storage area, and ash pile area. The highest metal contamination was found near the ash pile and drum storage areas in the rear of the property.

DIRECT CONTACT

No reported incidents of direct contact were noted in Department files. The potential for direct contact is low since the facility is inactive and surrounded by a fence. The nearest residential area is about 1/2 mile to

to the west. There is a potential for exposure by highway construction workers next to the site and the few security and maintenance staff at the facility. Past BBD employees may have been exposed to hazardous materials due to sloppy housekeeping and waste handling practices and contamination which has been documented throughout the site.

FIRE AND EXPLOSION

NJDEP Enforcement files contain two reports of fires at the site, however these did not directly involve hazardous substances or wastes present at the facility. A brush fire in 1985 encompassed the portion of the site containing the automobile tire pile, but did not spread to the rows of drums in the rear of the property. A smaller brush fire also occurred at the site in 1986. Most of the drums stacked in the rear of the property (30,000 estimated) are reported to be empty, however there may be volatile or flammable residues present in some of the drums. EPA inspectors noted 100-150 drums containing ash residues and aqueous materials in a building near the incinerator area during a recent inspection and sampling episode. Samples collected from an ash pile inside the building and an aqueous drum sample showed volatile organic contamination, representing a potential fire or explosion hazard.

ADDITIONAL CONSIDERATIONS

The potential for damage to flora and fauna is low due to the urban location of the site and apparent lack of plant and animal life. Potential migration of contaminants from the site via surface runoff and storm sewers could have an adverse impact on Passaic River biota. The potential for damage to offsite property exists through migration of contaminants in groundwater and surface runoff. Contamination was found in the proposed N.J. Turnpike right-of-way adjacent to the eastern site boundary.

EPA RCRA ENFORCEMENT INSPECTION

A RCRA sampling inspection was conducted at Bayonne Barrel and Drum on June 2, 1988 by EPA Region II personnel. The facility was found to be in violation of RCRA and TSCA violations based upon sampling results and a visual inspection of the site. Analytical data showed that several waste ash piles present at the site are considered a hazardous waste due to levels of cadmium above RCRA criteria limits for EP Toxicity. The ash pile in the rear of the property showed PCB contamination of 115 ppm and 293 ppm for arochlor 1248 and 1252, respectively. Approximately 100-150 drums were observed in the drum and ash storage room which were not labeled as a hazardous waste and apparently stored for greater than 90 days.

ENFORCEMENT ACTIONS

An EPA Consent Agreement and Order issued in 1984 cited Bayonne Barrel and Drum Co. for operation of a hazardous waste facility and storage of hazardous wastes without a hazardous waste permit. The order required the facility to implement a soil sampling program and to remove hazardous waste piles present at the site, liquid and sludge from the oil storage tanks, and areas of contaminated soil identified on the property. The facility was also required to submit a closure plan. A soil and groundwater characterization study was completed in 1986, however BBD has not complied with the remaining terms of the consent agreement.

The U.S. Justice Department has filed a suit against the company and its president, Frank Langella, for various violations of RCRA and failure to comply with the terms of the EPA consent agreement. The case is currently

in litigation. An attorney for the U.S. Justice Department has indicated that the facility may be sold to a third party which may be willing to conduct the cleanup, in which case the site would be subject to ECRA regulations. As previously mentioned, BBD filed for bankruptcy in 1982 and has reportedly defaulted on a bank loan, thus the bank (First National State Bank) could foreclose and take title to the property but has apparently not done so because they would be considered a responsible party under CERCIA as owner of the site. Both the EPA and U.S. Justice Department have expressed interest in having the NJDEP involved in reviewing any sampling/cleanup plans which may be developed for the site following litigation.

RECOMMENDATIONS

A high priority is assigned to the site due to the documented soil and groundwater contamination and wastes present at the site including several ash piles, 100-150 drums containing ash residues and aqueous materials, and oil storage tanks. The estimated 30,000 drums stacked in rows in the rear of the property are reportedly empty, however some of the drums may contain small amounts of material.

A Site Inspection Review is recommended in lieu of a sampling episode since analytical data is available. At this time the case should be transferred to the Responsible Party Cleanup Element Bureau of Case Management - State Program for overall case management responsibilities. Any future site investigation/remediation efforts should be consistent with ECRA requirements since there is a strong possibility that the facility may be sold thereby necessitating case transfer to the Industrial Site Evaluation Element.

Submitted by:

Ewar Homen Edward Gaven, HSMS III

NJDEP Bureau of Planning and Assessment

October 24, 1988



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF HAZARDOUS WASTE MANAGEMENT

Michele M. Putnam Deputy Director

Hazardous Waste Operations

John J. Trela, Ph.D., Director 401 East State St. CN 028 Trenton, N.J. 08625-0028 (609)633-1408

Lance R. Miller Deputy Director

Responsible Party Remedial Action

MEMORANDUM

TO:

Colleen Hart, Administrative Assistant

Responsible Party Cleanup Element

FROM:

Linda Grayson, Chief

Bureau of Planning and Assessment

27 DEC 1988

SUBJECT:

CASE TRANSFER: BAYONNE BARREL AND DRUM CO.

154 RAYMOND BLVD.

NEWARK, ESSEX COUNTY, NEW JERSEY

SIN SCORE 31.7

The subject case is being transferred at this time to the Responsible Party Cleanup Element-Bureau of State Case Management for overall case management responsibilities concerning site remediation.

An EPA consent agreement and order issued in 1984 required the facility to implement a soil sampling program and to remove ash/sludge piles present at the site, liquid and sludge from oil storage tanks, and areas of contaminated soil identified on the property. A soil and groundwater study submitted in 1986 by Dan Raviv Associates indicates the presence of soil and groundwater contamination at the site. Contaminants detected include volatile organics, petroleum hydrocarbons, metals, and PCB's.

Bayonne Barrel and Drum Company (BBD) operated a drum reconditioning facility at the site from the 1940's until about 1982 when the company filed for bankruptcy. The U.S. Justice Department has filed a suit against the company and its principal owner, Mr. Frank Langella, for various RCRA violations and failure to comply with the terms of the EPA consent agreement. The case is presently in bankruptcy litigation.

Copies of the preliminary assessment report and responsibly party investigation summary are attached. Although BBD and its principal owner are the primary responsible parties in this case, other potential responsible parties have been identified which have leased or eccupied the site and may also be responsible for site contamination.

It is possible that the site may fall under ECRA regulations following litigation since the facility may be sold to a third party. Should you have any questions concerning the attached information, please contact Ed Gaven of my staff at 292-4320.

EG:cm Attachment

c: Yacoub Yacoub, Chief, DHWM Metro Region Enforcement (w/o Attachments) Tom Kearns, Chief, ECRA Applicability and Compliance (w/o Attachments) Joel Golumbek, Chief, USEPA-NJ Hazardous Waste Compliance Branch (w/o Attachments)

Ed Govern



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State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF HAZARDOUS WASTE MANAGEMENT

John J. Trela, Ph.D., Director 401 East State St. CN 028

Trenton, N.J. 08625-0028 (609)633-1408 Lance R, Miller Deputy Director

Responsible Party Remedial Action

NOV 9 1988

Michael O. Hill, Attorney U.S. Department of Justice Environmental Enforcement Section Land and Natural Resources Division Washington, D.C. 20530

Dear Mr. Hill,

Michele M. Putnam

Hazardous Waste Operations

Deputy Director

Enclosed please find your case documents regarding United States v. Bayonne Barrel and Drum Co., et al. The preliminary assessment should be completed by December, at which time the case will be assigned to the NJDEP Responsible Party Cleanup Element - Bureau of Case Management for overall case management responsibilities regarding site remediation. However, should a sale of the facility occur, the case would then be transferred to the Industrial Site Evaluation Element (ECRA program).

Should you have any futher questions, please contact me at 609-292-4320. Thank you for your help in this matter.

Sincerely,

Edward Gaven

NJDEP Bureau of Planning and Assessment

original signed by

EG:mz Enclosure SITE INSPECTION REVIEW

BAYONNE BARREL AND DRUM CO. 154 RAYMOND BLVD. NEWARK, ESSEX COUNTY, N.J. EPA ID # NJD009871401

GENERAL INFORMATION AND SITE HISTORY

Bayonne Barrel and Drum Co. is an inactive facility located in an industrial area of Newark, bordered by Route 1 and 9 to the west, the New Jersey Turnpike to the east, and an empty lot previously occupied by the Newark drive-in movie theater to the south. The site covers approximately 15 acres and consists of three main buildings and a large yard area. Most of the site is in Block 5002 Lot 3 (9.3 acres) and is owned by Bayonne Barrel and Drum Co. Block 5002 Lot 14 (5.5 acres) is owned by Frank Langella, principal owner of BBD, and is used as part of the facility for drum storage.

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Barbara and Henry Smith 1931 - 1933
B & F Co. Inc. Prior to 1931

N.J. Department of State records indicate that B & F Co. incorporated in 1931 and dissolved in 1935; Colville Bros. incorporated in 1933 and dissolved in 1945.

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- 1947 landfill activity in the southern portion of the site.
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 - drainage channels connecting lagoon to Passaic River.
 - large open storage area containing several thousand drums.
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SITE OPERATIONS OF CONCERN

Operations at the BBD facility involved both closed head and open head drums. The closed head system employed chains and caustic solution to remove residues in the drums. Spent solution from the process drained through an oil/water separator trench into a 5,000-gallon underground tank, and then was pumped into a 60,000-gallon above-ground holding/settling tank prior to being discharged to the sewer under a permit with the Passaic Valley Sewage Commission. Open head drums were placed on a conveyer and processed through the incinerator with residue from the process collected in two subsurface holding/settling tanks, and then placed into a dumpster/trailer prior to being manifested off-site.

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- wastewater overflow from the 5,000-gallon tank was observed entering a storm sewer as a result of a frozen pump and broken lines to the tank; the storm sewer reportedly flows to a small creek leading to the Passaic River.
- oil staining on ground surface near the above-ground tank.
- ash/sludge material on ground surface around incinerator.
- ash/sludge pile (220' x 50' x 4') on ground in rear of property, uncovered with no containment or runoff control.
- approximately 30,000 drums stacked on ground in rear of property;
 a random survey indicated about half of the drums contained some amount of material.

The ash pile and rows of drums (30,000 estimated) still remain in the rear of the property. The plastic cover over the ash pile is in poor condition, leaving the pile partially uncovered. In addition, a RCRA enforcement inspection conducted by EPA during June 1988 noted a large ash pile and 100-150 drums containing ash and aqueous materials in a building near the incinerator. There is also an ash pile in the courtyard between the incinerator and furnace room building.

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acres and received construction and demolition debris. It is located in the area between Foundry Street and Raymond Blvd. and encompassed the southern portion of the BBD site and the former drive-in movie theater to the south. The permit was issued 2/15/88 and includes 13 groundwater monitoring wells.

GROUNDWATER ROUTE

A soil and groundwater characterization report for the BBD site was submitted by Dan Raviv Associates in July 1986. The report contains soil and groundwater sampling data and information on site geology and groundwater conditions. Soil and well boring data indicate that the site is underlain by the following materials:

- black coal-cinder fill material: 0-10 feet
- medium to coarse grained sand: 10-40 feet
- dark red-brown coarse silt: 40-50 feet
- dark red shale (Brunswick Formation): below 50 feet

Field investigations by Dan Raviv Associates included the installation of four monitoring wells (20-50 feet deep) and one well point (10 feet deep). The monitoring wells included two background locations, one near the ash pile, and one near the oil storage tanks the northeast portion of the site. Groundwater samples were analyzed for volatile organics, petroleum hydrocarbons, and PCB's. The monitoring well near the above-ground tank (downgradient location) was also analyzed for priority pollutants. Depth to groundwater is 3-4 feet and the direction of flow is toward the east.

Sampling data indicate that groundwater beneath the site is contaminated with volatile organics, petroleum hydrocarbons, and PCB's at concentrations significantly above background. The monitoring well near the ash pile showed low level contamination with benzene (28 ppb), napthalene (14 ppb), and di-n-butylphthalate (28 ppb). Groundwater in the northeast portion of the site near the oil storage tanks was found to be contaminated with PCB's (53 ppb), petroleum hydrocarbons (2,000 ppm), toluene (150 ppb), chlorobenzene (67 ppb), ethylbenzene (1,060 ppb), dichlorobenzenes (76 ppb), and various non-priority pollutant organics including cyclohexane (60 ppb), cycloheptane (100 ppb), isopropylbenzene (90 ppb), n-propylbenzene (150 ppb), ethyl toluene isomers (550 ppb), trimethylbenzene isomers (1400 ppb), and xylene isomers (2000 ppb).

A soil and groundwater study was also completed by Louis Berger Associates in 1986 in order to characterize contamination in the proposed NJ Turnpike right-of-way adjacent to the eastern site boundary. Two additional monitoring wells were installed in this area and the results showed contamination with volatile organics (up to 98 ppb), polynuclear aromatic hydrocarbons (34 ppb), phenol (877 ppb), and 2,4-dimethylphenol (860 ppb).

NJDEP water supply overlay and water allocation maps show no major public supply wells within a 3 mile radius of the site. Groundwater in the area is not used for drinking, however there are a number of industrial supply wells on the order of 200-700 feet deep which draw from the Brunswick Formation. Downward migration of contaminants at the BBD site could have an adverse impact on water quality of the Brunswick Formation.

SURFACE WATER ROUTE

The nearest downslope surface water is the Passaic River about 2000 feet to

the east, which empties into the Newark Bay roughly one mile south of the site. Storm sewers at the site reportedly lead to Harrison's Creek and the Passaic River. A NJDEP inspection in 1982 reported wastewater flowing into a storm sewer as a result of equipment malfunctions at the facility. Sample of the wastewater discharge to the storm sewer showed contamination with benzene, toluene, xylene, ethylbenzene, methylene chloride, and 1,1,1-trichloroethane. The Passaic River is used for industrial purposes and occasional recreational boating.

AIR ROUTE

There are no records of air sampling conducted at the site. The facility had 12 air pollution control permits during its operation (plant ID #05103) that included drum cleaning units, paint spray booths and ovens, drum incinerator, baghouses, and a deisel fuel and gasoline tank.

During 1978 the facility was cited for opacity violations which resulted from drums not being emptied properly prior to incineration. Hydrogen sulfide type odors and other strong odors were noted by Louis Berger Associates during work along the eastern portion of the site, and by road workers during construction along Route 1 and 9. The potential for air contamination exists due to the documented volatile organic contamination at the site, however there are other sources of air pollution in the area from adjacent highways and the Newark Airport located about three miles to the south.

SOIL

Field work completed by Dan Raviv Associates included soil samples from 19 soil borings (up to 15 feet deep) and five well borings (up to 42 feet deep). A total of 71 soil samples were analyzed at depths ranging from 0-22 feet for a variety of parameters including total petroleum hydrocarbons, volatile organics, PCB's, and priority pollutant scan. One sample was analyzed for dioxin. The highest levels of soil contamination detected at the site are listed as follows:

total priority volatile organics -		22,553	ppb
total non-priority volatile organics	-	66,035	ppb
total petroleum hydrocarbons -		173,000	ppm
PCB's		320	ppm
arsenic			ppm
cadmium		1300	ppm
chromium		3400	ppm
copper		15,500	ppm
lead		8,400	-
mercury		13.0	ppm
zinc		5040	

Petroleum hydrocarbon concentrations above 100 ppm were detected throughout the site at depths up to ten feet. Volatile organic and PCB contamination was detected in the oil storage tanks area, drum storage area, and ash pile area. The highest metal contamination was found near the ash pile and drum storage areas in the rear of the property.

DIRECT CONTACT

No reported incidents of direct contact were noted in Department files.

The potential for direct contact is low since the facility is inactive and surrounded by a fence. The nearest residential area is about 1/2 mile to

to the west. There is a potential for exposure by highway construction workers next to the site and the few security and maintenance staff at the facility. Past BBD employees may have been exposed to hazardous materials due to sloppy housekeeping and waste handling practices and contamination which has been documented throughout the site.

FIRE AND EXPLOSION

NJDEP Enforcement files contain two reports of fires at the site, however these did not directly involve hazardous substances or wastes present at the facility. A brush fire in 1985 encompassed the portion of the site containing the automobile tire pile, but did not spread to the rows of drums in the rear of the property. A smaller brush fire also occurred at the site in 1986. Most of the drums stacked in the rear of the property (30,000 estimated) are reported to be empty, however there may be volatile or flammable residues present in some of the drums. EPA inspectors noted 100-150 drums containing ash residues and aqueous materials in a building near the incinerator area during a recent inspection and sampling episode. Samples collected from an ash pile inside the building and an aqueous drum sample showed volatile organic contamination, representing a potential fire or explosion hazard.

ADDITIONAL CONSIDERATIONS

The potential for damage to flora and fauna is low due to the urban location of the site and apparent lack of plant and animal life. Potential migration of contaminants from the site via surface runoff and storm sewers could have an adverse impact on Passaic River biota. The potential for damage to offsite property exists through migration of contaminants in groundwater and surface runoff. Contamination was found in the proposed N.J. Turnpike right-of-way adjacent to the eastern site boundary.

EPA RCRA ENFORCEMENT INSPECTION

A RCRA sampling inspection was conducted at Bayonne Barrel and Drum on June 2, 1988 by EPA Region II personnel. The facility was found to be in violation of RCRA and TSCA violations based upon sampling results and a visual inspection of the site. Analytical data showed that several waste ash piles present at the site are considered a hazardous waste due to levels of cadmium above RCRA criteria limits for EP Toxicity. The ash pile in the rear of the property showed PCB contamination of 115 ppm and 293 ppm for arochlor 1248 and 1252, respectively. Approximately 100-150 drums were observed in the drum and ash storage room which were not labeled as a hazardous waste and apparently stored for greater than 90 days.

ENFORCEMENT ACTIONS

An EPA Consent Agreement and Order issued in 1984 cited Bayonne Barrel and Drum Co. for operation of a hazardous waste facility and storage of hazardous wastes without a hazardous waste permit. The order required the facility to implement a soil sampling program and to remove hazardous waste piles present at the site, liquid and sludge from the oil storage tanks, and areas of contaminated soil identified on the property. The facility was also required to submit a closure plan. A soil and groundwater characterization study was completed in 1986, however BBD has not complied with the remaining terms of the consent agreement.

The U.S. Justice Department has filed a suit against the company and its president, Frank Langella, for various violations of RCRA and failure to comply with the terms of the EPA consent agreement. The case is currently

in litigation. An attorney for the U.S. Justice Department has indicated that the facility may be sold to a third party which may be willing to conduct the cleanup, in which case the site would be subject to ECRA regulations. As previously mentioned, BBD filed for bankruptcy in 1982 and has reportedly defaulted on a back loan, thus the bank (First National State Bank) could foreclose and take title to the property but has apparently not done so because they would be considered a responsible party under CERCIA as owner of the site. Both the EPA and U.S. Justice Department have expressed interest in having the NJDEP involved in reviewing any sampling/cleanup plans which may be developed for the site following litigation.

RECOMMENDATIONS

No additional sampling is recommended at this time by the Bureau of Planning and Assessment since adequate data is available which documents the presence of soil and groundwater contamination at the site. A summary of sampling data is attached. At this time the case should be transferred to the Responsible Party Cleanup Element Bureau of Case Management - State Program for overall case management responsibilities. Any future site investigation/remediation efforts should be consistent with ECRA requirements since there is a strong possibility that the facility may be sold following the bankruptcy litigation, thereby necessitating case transfer to the Industrial Site Evaluation Element.

Submitted by:

Edward Hoven

Edward Gaven, HSMS III NJDEP Bureau of Planning and Assessment December 2, 1988

SUMMARY OF SAMPLING DATA

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EPA RCRA INSPECTION AND SAMPLING EPISODE REPORT.

Sampling Date: Sampled By: May 16, 1984

EPA Surveillance and Monitoring Branch

Samples: soil - 3

waste (aqueous) - 3 waste (ash/sludge) - 3

Laboratory: Parameters: EPA Region II Laboratory, Edison, N.J. Soil and ash samples were analyzed for

volatile and non-volatile organics, metals, PCB's, and EP Toxicity. Aqueous samples were

analyzed for volatile and non-volatile organics, and RCRA characteristics

(ignitability, corrosivity).

Sample Description:

Soil samples included one each from the area around the underground settling tank, the subsurface tank near the incinerator, and the

oil/water separator trench.

Ash samples were collected from the

ash sludge pile in the rear of the property. Aqueous samples were collected from the underground settling tank, the subsurface tank near the incinerator, and the oil/water

separator trench.

Results:

Contaminants detected in soil samples included the following substances along with highest concentrations shown in parenthesis: cadmium (59 ppm), chromium (1,200 ppm), copper (1,100 ppm), mercury (27 ppm), lead (4,500 ppm), arochlor 1248 (67.2 ppm), and arochlor 1254 (117.5 ppm). Total volatile

organic and base neutral organic

concentrations were on the order of 4.1 ppm and 1,950 ppm, respectively. Ash samples showed contamination with cadmium (160 ppm), chromium (3,300 ppm), copper (3,300 ppm), and

mercury (21 ppm), while total volatile

organic and base neutral organic

concentrations were on the order of 400 ppm and 2,000 ppm, respectively. The ash pile in the rear of the property was determined to be EP toxic for cadmium and lead. Contaminants detected in the aqueous waste samples

included toluene (4.9 ppm), bis

(2-ethylhexyl) phthallate (13 ppm), butyl benzl phthallate (1.1 ppm), and di-n-butyl

phthallate (1.8 ppm).

QA/QC Information:

The sampling report contained no information regarding any blank or duplicate samples, or whether the data were subject to a QA/QC review. Sampling was conducted in accord with EPA standard procedures.

File Location:

NJDEP/DHWM Metro Field Office, West Orange,

N.J.

II. LOUIS BERGER ASSOCIATES REPORT - SAMPLING IN PROPOSED NJ TURNPIKE RIGHT OF WAY.

Sampling Dates: Sampled By: April 25, 26, 28, 1988 and May 5, 6, 27, 1988 Louis Berger Associates, East Orange, N.J.

Samples:

soil - 21 groundwater - 2

Laboratory: Parameters: ETC Laboratory, Edison, N.J. Priority pollutants plus forty

Sample Description:

Soil samples included fourteen discrete

samples and seven composite samples at depths up to three feet. Groundwater samples were collected from two monitoring wells (15 feet

deep) installed along the eastern site

boundary.

Results:

Soil contaminants included arsenic (73 ppm), cadmium (71 ppm), chromium (590 ppm), copper (870 ppm), lead (8,520 ppm), benzene (31 ppm), ethylbenzene (408 ppm), toluene (321 ppm), 2,4-dimethylphenol (188 ppm), phenol (58.9 ppm), and PAH compounds (up to 861

ppm). Groundwater samples showed contamination with toluene (76.6 ppb), ethylbenzene (15.9 ppb), benzene (5.6 ppb). 2,4-dimethylphenol (860 ppb), phenol (877 ppb), acenaphthene (9.2 ppb), fluorene (3.15

ppb), naphthalene (16.3 ppb), and

phenanthrene (4.9 ppb).

QA/QC Information:

The sampling report indicated that chain of custody procedures were carried out in accord

with EPA and NJDEP procedures. The

analytical data were not subject to a QA/QC review by NJDEP, however the lab reports (NJDEP Tier II format) were reviewed by a QA Coordinator from the consulting firm, Louis

Berger Associates.

File Location:

EPA Surveillance and Monitoring Branch

Edison, N.J.

III. DAN RAVIV ASSOCIATES REPORT - SOIL AND GROUNDWATER CHARACTERIZATION

Sampling Dates:

January 18, 1985; October 25-31, 1985;

November 27 to December 17, 1985; January 7,

1986.

Sampled By:

Dan Raviv Associates, West Orange, N.J.

Samples:

soil - 75 (approx.)

sediment - 4

surface water - 1 groundwater - 5

Laboratory:

Gollob Analytical Laboratory, Berkeley

Heights, N.J.

Parameters:

Sample parameters included priority

pollutants plus forty, volatile organics plus

fifteen, PCB's, metals, petroleum

hydrocarbons, and dioxin.

Sample Description:

Soil samples were collected from nineteen soil borings (up to 15 feet deep) and five

well borings (up to 42 feet deep).

Approximately 75 soil samples were analyzed at depths up to 22 feet. Sediment samples were collected from the oil separator trench and from drainage canals and floor pits

inside three of the buildings surrounding the incinerator area. The surface water sample was collected from the oil separator trench.

The highest levels of contamination are

listed as follows:

Results:

soil:	total priority volatile organics	22.5	ppm
	total non-priority volatile organics	66.0	ppm
	total petroleum hydrocarbons	173,000	ppm
	PCB's	320	ppm
	arsenic	390	ppm
	cadmium	1,300	ppm
	chromium	3,400	ppm
	copper	15,500	ppm
	lead	8,400	ppm
	mercury	13	ppm
	zinc	5,040	ppm
sediment:	petroleum hydrocarbons	39,400	ppm
	toluene	39	ppb
	PCB's	130	ppm
surface water:	petroleum hydrocarbons	670	ppm
groundwater:	petroleum hydrocarbons	2,000	ppm
24.000.000	PCB's	53	ppb
	chlorobenzene	67	ppb

QA/QC Information:

Analytical data included four field blanks, two lab duplicates, and chain of custody records. The data were not subject to a

1,060 ppb

150 ppb

76 ppb

formal QA/QC review by NJDEP.

File Location:

EPA Surveillance and Monitoring Branch

Edison, N.J.

ethylbenzene

dichlorobenzene(s)

toluene

IV. EPA RCRA INSPECTION AND SAMPLING REPORT

Sampling Date:

June 2, 1988

Sampled By:

EPA Surveillance and Monitoring Branch,

Edison, N.J.

Samples:

waste (ash piles) - 5

waste (aqueous samples) - 5

Laboratory:

EPA Region II Laboratory, Edison, N.J.

Parameters:

Volatile organics, non-volatile organics,

PCB's, EP Toxicity metals.

Description:

Samples were collected from waste ash piles in the furnace room building, the drum and ash storage room, the courtyard area near the incinerator, and from the large ash pile in the rear of the property. Aqueous samples were collected from the oil separator trench,

the pump house, the underground

holding/settling tank, a drum inside the drum and ash storage room, and from ponded water

in the courtyard area.

Results:

The highest levels of contamination are

listed as follows:

Ash samples:

furnace room ash pile - low levels of volatile organic and PAH compounds.

courtyard ash pile - ethylbenzene (570 ppb), toluene (1,300 ppb), xylene (1,200 ppm), PAH compounds.

drum and ash storage room ash pile - ethylbenzene (1,500 ppb),
 tetrachloroethylene (1,200 ppb), toluene (2,700 ppb),
 trichloroethylene (550 ppb), xylene (3,200 ppb), PAH compounds.

ash pile in rear of property - ethylbenzene (5,200 ppb), tetrachloroethylene (1,300 ppb), toluene (12,000 ppb), trichloroethylene (490 ppb), xylene (4,600 ppb), styrene (2,500 ppb), arochlor 1248 (293 ppm), arochlor 1254 (115 ppm), EP Tox cadmium (2,84 ppm), PAH compounds.

Aqueous samples:

oil separator trench - low level volatile organics and PAH compounds. pump house - ethylbenzene (130 ppb), toluene (660 ppb), vinyl chloride (18 ppb), PAH compounds.

underground tank - low level volatile organics and PAH compounds.
courtyard area - low level volatile organics and PAH compounds.
drum sample - benzene (92 ppm), chlorobenzene (78 ppm), ethylbenzene
(1,200 ppm), tetrachloroethylene (62 ppm), toluene (2,400 ppm),
xylene (10,000 ppm), dichlorobenzene(s) (200 ppm), dibenzofuran
(567 ppb), 2,4-dinitrotoluene (597 ppb).

QA/QC Information:

Samples were collected in accord with EPA standard sampling protocol and chain of custody procedures. Analytical data were subject to a QA review by EPA Region II personnel. Samples were split with Interwaste Services Company (ISCO), which was contracted by BBD to collect split samples and observe EPA sampling procedures.

File Location:

EPA Surveillance and Monitoring Branch

Edison, N.J.



Site Inspection Report

BAYONNE BARREL AND DRUM COMPANY 154 RAYMOND BLVD. NEWARK, ESSEX COUNTY, N.J.

EPA ID# NJD 009871401

Hours: 25

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POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

	I. IDENTIFICATION					
7	01 STATE	02 SITE NUMBER				

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II. SITE NAME AND LOCAT		7 19 100			
O) SITE NAME Less comme proc	strictive rame of sie	0	2 STREET, ROUTE NO . OR SPE	CIFIC LOCATION IDENTIFIER	
Bayonne Barrel	and Drum Co.		15% Paymond Blog	d	
O3 CITY	WINE PLANE SING		154 Raymond Bly	06 COUNTY	O7COUNTY CE CO.
Newark		10 TYPE OF OWNERSHIP	NJ 07105	Essex	CODE DE
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III. INSPECTION INFORMA	TION				
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17 ACCESS GAINED BY ICheck one. I PERMISSION I WARRANT	8 TIME OF INSPECTION	19 WEATHER CONDI	TIONS		
IV. INFORMATION AVAILA	BLE FROM				
D1 CONTACT		02 OF (Agency Organiza	I(ron)		03 TELEPHONE NO
Mike Ferriola			eillence and Mo	nitoring Bran	ch 201 321-6776
04 PERSON RESPONSIBLE FOR S Ed Gaven	SITE INSPECTION FORM	NJDEP	DHWM/BPA	609/292-432	

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

I. IDENTIFICATION
OF STATE OF SITE NUMBER
DO09871401

			100 100	EINFORMATION			
	TATES, QUANTITIES, A			Carlotte and the			
XX A SOLID B POWDER, FINES X F UDUID C S CLUDGE TONS CUBIC YARDS		of waste quantities e independently	1500 X D PERSISTENT X H		UBLE XXI HIGHLY VOLATILE ICTIOUS I EXPLOSIVE MMABLE I REACTIVE TABLE I INCOMPATIBLE I M NOT APPLICABLE		
III. WASTE	YPE	1		-			
CATEGORY	SUBSTANCE	NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS		
(SLU)	SLUDGE		1.500-	5	ash/el	udge pile	
(OLW)	OILY WASTE		70,000	gallons		sludge stora	age tanks
(SOL)	SOLVENTS		unknown	,	OII and	,	0
PSD	PESTICIDES		1				
(occ)	OTHER ORGANIC C	HEMICALS	unknown				
10C	INORGANIC CHEMI		GIRAGWIE			-	
ACD	ACIDS						
BAS	BASES						
(MES	HEAVY METALS		unlen	1 500			
IV. HAZARD	OUS SUBSTANCES S.	Appendix for most freque	IINKDOWN				
01 CATEGORY	02 SUBSTANCE		03 CAS NUMBER	D4 STORAGE/DIS	POSAL METHOD	05 CONCENTRATION	06 MEASURE OF
SOL	benzene		71-43-2	Groundwate	er Samples	28	ppb
SOL	chlorobenzene		108-90-7	* Concentra		67	ppb
SOL	ethybenzene		100-41-4	shown are		1,060	ppb
SOL	toluene		108-88-3	highest le		150	ppb
SOL	xylene		1330-20-7	detected in		2,000	ppb
SOL	diethyl ether	-	-	groundwater		30	ppb
SOL				samples.		90	ррь
OCC	isoprophyl he n-propvlbenze			samples.		150	ppb
OCC	di-n-butylpht		84-74-2			28	ppb
OCC	napthalene	marrate	91-20-3		-9	14	ppp
OCC	cyclohexane		110-82-7			60	ppb
OCC	cycloheptane		1				-
		1 1	105 67 0			860	ppb
OCC	2.4-dimethylp	nenol	105-67-9 108-95-2			877	ppb ppb
000	phenor		100-93-2			077	ppo
V. FEEDSTO	CKS (See Appendix for CAS form	Ders)					
CATEGORY			02 CAS NUMBER	CATEGORY	. 01 FEEDST	OCK NAME	02 CAS NUMBER
FDS	nic i			FDS		77-37-43	
FDS				FDS			
FDS				FDS			
FDS			-	FDS			
	S OF INFORMATION (CA	NO. OF SEC.	W. W. W. W. W.				-

Soil and Groundwater characerization Report- Dan Raviv Associates (Ref. B)

Sampling in Proposed NJ Turnpike Right-of-Way- Louis Berger Associates (Ref. C)

POTENTIAL HAZARDOUS WASTE SITE

I. IDENTIFICATION

PART 2 - WASTE INFORMATION					871401		
IL WASTE	STATES, QUANTITIES, AND	CHARACTER	STICS				
			TY AT SITE D3 WASTE CHARACTERISTICS (Check at their a proposed and their		UBLE CI. HIGHLY VOLATILE CTIOUS CJ. EXPLOSIVE MMABLE CK. REACTIVE		
III. WASTE							
CATEGORY	SUBSTANCE NAM	ΙE	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS		
SLU	SLUDGE						
OLW	OILY WASTE			1	ii —		
SOL	SOLVENTS				77		
PSD	PESTICIDES						
occ	OTHER ORGANIC CHEM	MICALS			-		
юс	INORGANIC CHEMICAL	7.2 * 4.4					
ACD	ACIDS						
BAS	BASES	-	-				
MES	HEAVY METALS						
IV. HAZARD	OUS SUBSTANCES See Appear	dis for most frequent	y cated CAS Numbers)				
DI CATEGORY			03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD		05 CONCENTRATION	06 MEASURE OF
SOL	benzene		71-43-2			265	ppb
SOL	chlorobenzene		108-90-7	Soil Samples		650	ppb
SOL	ethylbenzene		100-41-4			8,000	ppb
SOL	1,1-dichloroeth	nane	75-34-3			1,000	ppb
SOL	1.2-dichloroeth	vlene	25323-30-2	* Concentrations		1,100	ppb
SOL	methylene chlor		75-09-2	shown are the		740	ppb
SOL	1,1,1-trichlore		71-55-06	highest levels		1 850	ppb
SOL	trichloroethyle		79-01-6	detected in soil		830	ppb
SOL	toluene		108-88-3	samples.		14,000	ppb
SUL	xylene		1330-20-7			9,600	ppb
SOL	methyl ethyl ke	etone	78-93-3			170	ppb
SOL	methyl isobuty		105-44-2			730	ppb
SOL	styrene		100-42-5			450	ppb
OCC	acenaphthene		83-32-9			19,600	ppb
OCC	anthracene	10	120-12-7			15,300	ppb
OCC	benzo (a) anthra	acene	56-55-3		22,000		ppb
V. FEEDSTO	CKS (See Assertan for CAS Removes)		-				1
CATEGORY		AME	G2 CAS NUMBER	CATEGORY	D1 FEEDS	TOCK NAME	02 CAS NUMBER
FDS				FDS	1001	3-73742	
FDS				FDS			
FDS				FDS			
FDS .			-	FDS			
	S OF INFORMATION			1,55			

Soil and Groundwater Charaterization Report-Dan Raviv Associates (Ref. B)
Sampling in Proposed N.J. Turnpike Right-of-Way---Louis Berger Associates (Ref.C)

POTENTIAL HAZARDOUS WASTE SITE

I. IDENTIFICATION				
OI STATE	°2 50509871401			

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II. WASTES	TATES, QUANTITIES, A	ND CHARACTER	ISTICS	CINVAL W			
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III. WASTE T		NO. OF DRUMS					
CATEGORY	SUBSTANCE N	NAME	D1 GROSS AMOUNT	02 UNIT OF MEASUR	E 03 COMMENTS		
SLU	SLUDGE	NOTE:	OT GROSS AMOUNT	UZ UNIT OF MEASUR	US COMMENTS		
OLW	OILY WASTE						
SOL	SOLVENTS						
PSD	PESTICIDES						
occ	OTHER ORGANIC CI	HEMICAI S			1	-	
юс	INORGANIC CHEMIC				1		
ACD	ACIDS	inco	-				
EAS	BASES				-		
MES	HEAVY METALS						
IV. HAZARO	OUS SUBSTANCES See A	points for most frequent	ty cred CAS Mumbers!				
OT CATEGORY	02 SUBSTANCE N		03 CAS NUMBER	04 STORAGE/DS	SPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF
OCC	benzo(a) pyrene		50-32-8			18,000	ppb
OCC	benzo (b) fluoranthene		207-08-9	Soil Samples		23,000	ppb
CCC	benzo (g,h,i)		191-24-2	•		4,000	ppb
OCC	bis (2-ethylhe	xyl)phthal	late 117-81	-7 * Concentrations		290,000	ppb
occ	butyl benzyl	phthallate	85-68-7	shown are the		30,100	ppb
occ	chrysene	V-	218-01-9	highest levels		24,400	ppb
OCC	1,4-dichlorob	enzene	25321-22-6	detected in soil		11,800	ppb
occ	diethyl phtha		84-66-2	samples		11,500	ppb
occ	dimethyl phth	iallate	131-11-3	24.2		22,000	ppb
occ	di-n-butyl ph	thallate	84-74-2			87,900	ppb
occ	fluoranthene	11111111	206-44-0			35,900	ppb
OCC	fluorene		86-73-7		7	29,300	ppb
OCC	napthalene		91-20-3		· ·	191,000	ppb
occ	phenanthrene		85-01-8			80,800	ppb
occ	pyrene		129-00-0			56,200	ppb
OCC	1.2.4-trichlore		120-82-1			24,700	ррЪ
V. FEEDSTO	CKS (See Appendix to CAS Munici	era)	2.000				
CATEGORY	01 FEEDSTOC	X NAME	02 CAS NUMBER	CATEGORY	O1 FEEDST	OCK NAME	02 CAS NUMBER
FDS				FDS	,	V	
FDS			1	FDS	7		
FDS	4			FDS			
FDS				FDS			

Soil and Groundwater Charaterization Report- Dan Raviv Associates (Ref. B)
Sampling in Proposed N.J. Turnpike Right-of-Way - Louis Berger Associates (Ref. C)

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 2 - WASTE INFORMATION

I. IDENTIFICATION NJ DOO9871401

	TATES, QUANTITIES, A	ND CHARACTER	IISTICS				
D1 PHYSICAL STATES (CHICK AFTINE BODY) EXA SOLID C E. SLURRY C B. POWDER, FINES C G GAS CUBIC YARDS ISOMOTH INO. OF DRUMS NO. OF DRUMS		of resile quantices	O3 WASTE CHARACTERISTICS (Check at mail abort) E A TOXIC			IVE VE PATIBLE	
III. WASTET	YPE	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
CATEGORY	SUBSTANCE	NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS		
SLU	SLUDGE						
OLW	OILY WASTE						
SOL	SOLVENTS	-					
PSD	PESTICIDES						
occ	OTHER ORGANIC C	HEMICALS					
IOC	INORGANIC CHEMI						
ACD	ACIDS			7			
SAS	BASES						
MES	HEAVY METALS						
IV. HAZARD	OUS SUBSTANCES 500	Appendus for most frequen	thy card CAS humbers)				
01 CATEGORY	02 SUBSTANCE		03 CAS NUMBER	04 STORAGE DISPOSAL METHOD		05 CONCENTRATION	DE MEASURE OF
-MES	arsenic		7440-38-2			390	ppm
MES	cadmium		7440-43-9	Soil Samples		1,300	ppm
MES	chromium	chromium				3,400	ppm
MES	copper		7440-50-8	* Concentrations		15.000	рош
MES	lead		7439-92-1	shown are the highest			ppm
MES	mercury			levels detected in		13.6	ppm
MES	zinc		7440-66-6	soil samples.		5,040	ppm
SOL	ethybenzene		100-41-4	waste asi	nile	5.200	pph
SOL	trichloroeth	vlene	79-01-6			490	ppb
SOL	tetrachloroe		127-18-4	The second second		1,300	ppb
SOL	toluene		108-88-3			12,000	ppb
SOL	xylene		1330-20-7			4,600	ppb
SOL	styrene		100-42-5			2,500	ppb
occ	arochlor 124	8	12672-29-6	1000000		293,970	ppb
OCC	arochlor 125		11097-69-1			115,400	The state of the s
V. FEEDSTO	CKS (See Appends to CAS Name	•	111077-09-1			113,400	ppb
CATEGORY	01 FEEDSTO		02 CAS NUMBER	CATEGORY	01 FEEDSTO	OCK NAME	02 CAS NUMBER
FDS				FDS	47.50		
FDS	+			FDS	-		
FDS				FDS		3	
FDS				FDS			
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EPA Investigation and Sampling Episode (Ref. A) Soil and Groundwater Charaterization Report-Dan Raviv Associates (Ref. B)

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

N.I. DOOG 87 140 1

ACI	A			EINFORMATION	i.	LNJ LDOOS	871401
II. WASTES	TATES, QUANTITIES, A	ND CHARACTER	ISTICS				
01 PHYSICAL STATES (Creece at this above) 02 WASTE QUANTITY		weste quertaes mososnoenti	DE WASTE CHARACTERISTICS (CARCA DE INA) BODY) DE A TOXIC DE SOLUBLE DE B. CORROSIVE DE F. INFECTIOUS DE FLAMMABLE DE REACTIVE DE D. PERSISTENT DE H. IGNITABLE DE M. NOT APPLICA				
RI. WASTE T		1000					
CATEGORY	SUBSTANCE N	IAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS	-	-
SLU	SLUDGE				35 55 1111		
OLW	OILY WASTE						
SOL	SOLVENTS						
PSD	PESTICIDES						
occ	OTHER ORGANIC CI	HEMICALS					
ЮС	INORGANIC CHEMIC						-
ACD	ACIDS						
BAS	BASES			-			
MES	HEAVY METALS				-		
IV. HAZARD	OUS SUBSTANCES Ser A	poends for most frequent	y cand CAS Journoers				Section 1
01 CATEGORY	02 SUBSTANCE N	AME	03 CAS NUMBER	04 STORAGE/DIS		05 CONCENTRATION	06 MEASURE OF
_SOL	benzene		- /1-43-2	-aqueous drum-sample		= 92,000	
SOL	chlorobenzen	e	108-90-7				ppb
SOL	ethylbenzene		100-41-4			78,000 1,200,000	ppb
SOL	tetrachloroe		127-18-4			62,000	ppb
SOL	xylene		108-88-3			10,000,000	ppb
SOL	toluene		1330-20-7		1	2,400,000	ppb
SOL	1-						
OCC	1,3-dichlore	benzene	25321-22-6			2,610	ppb
occ	1,4-dichlore		25321-22-6				ppb
occ	1,2-dichlore		25321-22-6			167,140	ppb
occ	napthalene		91-20-3			28,380	ррЪ
OCC:	dibenzofurar		132-64-9			567	ppb
occ	2.4-dinitrotol		132-64-9 121-14-2			597	ppb
V EFEDSTO	CKS (See Appenax for CAS Number				= - 18		
CATEGORY	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	17.10	02 CAS NUMBER	CATEGORY	01 FEEDSTO	CV NAME	02 CAS NUMBER
FDS			UZ CAS NUMBER	2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	UTFEEDSTO	CK NAME	UZ CAS NUMBER
FDS				FDS			
FDS				FDS			
FDS				FDS			
	OF WEDDAY TOOL			FDS			-
n. Sources	OF INFORMATION (CAR	Loechic references .e.g.	LIBIO INSE LAMON BRAINES	eport)			
	OF INFORMATION Con-						4

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

I. IDENTIFICATION

O1 STATE O2 SITE NUMBER

D009871401

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

II. HAZARDOUS CONDITIONS AND INCIDENTS	
01 & A, GROUNDWATER CONTAMINATION 03 POPULATION POTENTIALLY AFFECTED:	02 XOBSERVED (DATE JULY 1986) POTENTIAL ALLEGED O4 NARRATIVE DESCRIPTION
그 그 아니는 그들이 그는 일을 하는 것 같아 그리다.	is contaminated with vol_atile organics, petroleum
hydrocarbons and PCB's.	Ref. B
01 XB. SURFACE WATER CONTAMINATION 03 POPULATION POTENTIALLY AFFECTED:	02 T OBSERVED (DATE:) XT POTENTIAL T ALLEGED D4 NARRATIVE DESCRIPTION
[16] [2] [4] [1] [1] [1] [1] [1] [1] [1] [1] [1] [1	ation of surface run-off from site into the Passaic of a wastewater discharge into a storm sewer at the
그 얼마나 되었어요. 그는 그 그들은 없는데 얼마는 점점은 그가 가는 다른 그런 그렇게 하지 않는데 그 때 하지 않는 때 그리다. 이상에	nation with violatile organic compounds. Ref. E.S
01 \$\times\$ C. CONTAMINATION OF AIR 03 POPULATION POTENTIALLY AFFECTED:	02 C OBSERVED (DATE.) XX POTENTIAL CALLEGED 04 NARRATIVE DESCRIPTION
Potential exists due to docu	mented volatile organic contamination throughout the
	ted by highway construction workers adjacent to the
site.	Ref. B,L
01 X D. FIRE EXPLOSIVE CONDITIONS	02 TOBSERVED (DATE:) XX POTENTIAL TALLEGED
An EPA site inspection/sam	upling episode in 1988 reported 100-150 drums stored in
	. Drum and ash samples showed volatile organic
경시 그렇게 하는 사람이 하는 국민이들은 경우 아이라면 하는 사람이 하는 것이 되었다. 작가 되었다.	otential fire or explosive hazard. Brush fires were
reported at the site in 1985 an	
OKX E. DIRECT CONTACT	02 C OBSERVED (DATE.) A POTENTIAL CALLEGED
O3 POPULATION PCTENTIALLY AFFECTED: The potential for direct contac	t is low since the facility is inactive and surrounded
by a fence. The nearest residen	tial area is about ½ mile away, however there is a
potential for exposure of highw	ay construction workers along Route 1 and 9 and the
N.J. Turnpike.	Ref. A,L
01 X F. CONTAMINATION OF SOIL 03 AREA POTENTIALLY AFFECTED:	02 OBSERVED (DATE: July 1986) POTENTIAL ALLEGED C4 NARRATIVE DESCRIPTION
	s of contamination with volatile organics,
petroleum hydrocarbons, PCB's a	
	Ref. B
01 Z G. DRINKING WATER CONTAMINATION	02 C OBSERVED (DATE) C POTENTIAL C ALLEGED
03 POPULATION POTENTIALLY AFFECTED:	04 NARRATIVE DESCRIPTION
	since groundwater in the area is not used for drinking.
그리고 있는데 이번 얼마를 하셨다. 그래요요요요요요요요요요요요요요요요요요요요요요요요요요요요요요요요요요요요	nts could affect the Brunswick formation, which
is used for industrial purposes	in the Newark area. Ref. B Maps 5 & 7
01 X H. WORKER EXPOSURE/INJURY 03 WORKERS POTENTIALLY AFFECTED:	02 C OBSERVED (DATE:) X_ POTENTIAL C ALLEGED
	n exposed to hazardous substances due to sloppy
	practices and documented contamination on-site.
	rity and maintenance personnel present at the facility.
oriently, there are a rew beca	Ref. A,B
01 TI. POPULATION EXPOSURE INJURY 03 POPULATION POTENTIALLY AFFECTED	02 C OBSERVED (DATE:) X_ POTENTIAL C ALLEGED
	osure is low since the nearest residential area is
	is fenced in, however there is a potential for off-site
contamination and population ex	posure due to diban location.
contamination and population ex	Ref.

Ω EDA

POTENTIAL HAZARDOUS WASTE SITE

I, IDENTIFICATION

II. HAZARDOUS CONDITIONS AND INCIDENTS (COMMUNICATION)			
01 ÅJ. DAMAGE TO FLORA 04 NARRATIVE DESCRIPTION Potential migration of contami	02 COBSERVED (DATE	ff and storm sew	I ALLEGED ers may
have adverse impact on Passaic F		Ref. S	
01 E. K. DAMAGE TO FAUNA 04 NARRATIVE DESCRIPTION (INClude name) \$1.0' 3045(46)	02 TOBSERVED (DATE:) ¾ POTENTIAL	_ ALLEGED
Potential migration of contamir may have adverse impact in Passa		f and storm sewer	rs
01XXL CONTAMINATION OF FOOD CHAIN 04 NARRATIVE DESCRIPTION	02 COBSERVED (DATE:) X POTENTIAL	CALLEGED
Potential exists due to document	ed PCB and metal contam	nination at site. Ref. B	
01XX M UNSTABLE CONTAINMENT OF WASTES (Soes Runolf Standing bouds Learning drums 03 POPULATION POTENTIALLY AFFECTED:	02 TOBSERVED (DATE	1988 = POTENTIAL	_ ALLEGED
Ash piles in the rearof the procontrol.	pperty do not have adequ	ate containment Ref. A	or runoff
01 NAMAGE TO OFFSITE PROPERTY 04 NARRATIVE DESCRIPTION	02 Tobserved IDATE: July	1986) = POTENTIAL	= ALLEGED
Contamination related to past of	perations at the facilit	y has been detec	ted in the
proposed N.J. Turnpike Right-of-			
01 호 CONTAMINATION OF SEWERS. STORM DRAINS. W 04 NARRATIVE DESCRIPTION Samples of a wastewater discharg	ge into a storm sewer at	the facility in	
volatile organic contamination. River.	The storm sewer reports	edly leads to the	Passaic
01XXP ILLEGAL-UNAUTHORIZED DUMPING 04 NARRATIVE DESCRIPTION	02 T OBSERVED (DATE June)	1988 I POTENTIAL	I ALLEGED
Ash piles are stored on open gr indicate that the material is EN			The second secon
05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL OR	ALLEGED HAZARDS		-
An estimated 30,000 drums are The drums are reported to be emp			
III. TOTAL POPULATION POTENTIALLY AFFECTED:			
V. COMMENTS			
EPA Inspection and Sampling Epis Soil and Groundwater Characteriz Sampling in Proposed N.J. Turnpi	ation Report-Dan Raviv		
V. SOURCES OF INFORMATION ICAS SOCIETATIONS & G. MAI	e Ires semple analysis raports		
Sludge and Liquid Sampling Resul NJDEP Incident NOtification Report EPA Pollution Report on Fire Inc	ts-1982 (Ref. E) rts (Ref.L,M)		61

NJDEP Hazardous Waste Investigation Reports (Ref. S)

≎ EPA	F . N. 9 TO 1 1 1 1 1 1 1 1	ITE INSPEC	Committee of the second	Ōī	IDENTIFICATION STATE 02 STENUMBER 1401
II. PERMIT INFORMATION					
OI TYPE OF PERMIT ISSUED	02 PERMIT NUMBER NJ00 64068	03 DATE ISSUED 2-15-88	04 EXPIRATION DATE 2-28-90	inactive	15E sanitary land
□ B, UIC					
XI C. AIR	plant TD#0510		expired		
ID. RCRA					
I E. RCRA INTERIM STATUS		7			
TF. SPCC PLAN					
G. STATE SOMETH					
CH. LOCAL SOCONI	7				
I. OTHER SOCKY				16.	
IJ. NONE					
III. SITE DESCRIPTION					
A. SURFACE IMPOUNDMENT B. PILES C. DRUMS, ABOVE GROUND CO. TANK, ABOVE GROUND	1.500 cubic 100-150 cubic 65,000 gallo	yards Callins Cons	INCENERATION UNDERGROUND INJ CHEMICAL PHYSICA BIOLOGICAL WASTE OIL PROCES SOLVENT RECOVER OTHER RECYCLING	ECTION AL SING Y	OS CTHER **A. BUILDINGS ON SITE OB AREA OF SITE 15 .:Acres:
OT COMMENTS O1B- Ash pile in rear O1C- Drums located in stacked in rear O1D- Oil and sludge s O1E- Wastewater holding o4A and E: Incinerator OV. CONTAINMENT	side building ne of property, rep torage tank. ng/settling ta	ear incine cortedly e	rator area;	an estimat	

C A. ADEQUATE, SECURE

C B. MODERATE

X C. INADEQUATE, POOR

C D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Ash piles are stored in rear of property on open ground without proper containment or runoff control. Documented soil and groundwater contamination indicates inadequate containment of wastes.

V. ACCESSIBILITY

OI WASTE EASILY ACCESSIBLE: TYES INO 02 COMMENTS

Facility is surrounded by a fence to prevent access and is also inactive.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state fies, sample analysis, reports)

EPA Inspection and Sampling Episode (Ref. A)

Soil and Groundwater Characterization-Dan Raviv Associates (Ref. B)

NJPDES Permit and Fact Sheet (Ref. J)

NJDEP/BAPC Stack Log Listing (Ref. V)

≎ EPA	POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA					ENTIFICATION ATE DZ SITE NUMBES	
II. DRINKING WATER SUPPLY	r						
O1 TYPE OF DRINKING SUPPLY ICHIES AS EXPERSOR SURF COMMUNITY A NON-COMMUNITY C	й в <u>-</u>	02 STATUS ENDANGER A I	ED AFFECTE B = E =	0	MONITORED C X= F =		20-25 (mi)
III. GROUNDWATER				_			
0: GROUNDWATER USE IN VICINITY	NG B DRINKING	USTRIAL IRRIGATIO	IL-mase	ERCIAL piner squi	INDUSTRIAL IRRIGA	TION .	I D NOTUSED UNUSEABLE
02 POPULATION SERVED BY GROUNI	DWATER N/A		03 DISTANCE TO	NEARES	ST DRINKING WATER	WELL >	4.0(m.
04 DEFT + 10 G=50N0 WATER - Mr.	GS DIRECTION OF GROUP		06 DEPTH TO AGE OF CONCERN	_	OF AQUIFER		GE SOLE SOURCE ACUFES ☐ YES 〒 NO
D RECHARGE AREA	lraw from the Br	unswick f	11 DISCHARGE AL	REA MMENT	rs		
V. SURFACE WATER			Z NO	-			
I SURFACE WATER USE Instruct A RESERVOIR RECREATION DRINKING WATER SOURCE		ECONOMICALLY	т 3,с сом	MERCI	AL, INDUSTRIAL	Ē	D NOT CURRENTLY USED
NAME Passaic River	ED BODIES OF WATER			•	AFFECTED		DISTANCE TO SITE 2000 feet (m)
V. DEMOGRAPHIC AND PROPI	ERTY INFORMATION						
ONE (1) MILE OF SITE A. 32,000 NO OF PERSONS	TWO (2) MILES OF SITE B 100,000	c2	3) MILES OF SITE	02	DISTANCE TO NEAR		25(mi)
3 NUMBER OF BUILDINGS WITHIN TW	O 121 MILES OF SITE		04 DISTANCE TO	NEARES	ST OFF-SITE BUILDING	3	
nume	erous				0.10		(mi)
	rban industrial idential area i of the site inc	area bor s located	dered by about 1	the mil	NJ Turnpik e to the w	e and	

3

POTENTIAL HAZARDOUS WASTE SITE

I. IDENTIFICATION

VCFA	PART 5 - WATER, DEMOGR.	APHIC, AND ENVIRO	ONMENTAL DATA	NJ D009871401
VI. ENVIRONMENTAL INFORM				
OT PERMEABILITY OF UNSATURATED		rial and sand		offer a least
□ A. 10-8 - 10	-8 cm/sec S 8 10-4 - 10-8 cm/sec	€AC 10-4 - 10-3 c	mysec C D. GREATER TH.	AN 10-3 cm/sec
02 PERMEABILTY OF BEDROCK Check	fractured	d shale and sa	andstone	
A. IMPERI	MEABLE B. RELATIVELY IMPERN	MEABLE XC C. RELATIVE	ELY PERMEABLE D VE	RY PERMEABLE new man 10 - 2 cm sect
03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL (OH	
50 <u>(m)</u>				
06 NET PRECIPITATION 12 (in)	07 ONE YEAR 24 HOUR RAINFALL 2.5 (In)	SITE SLOPE 1-2	DIRECTION OF SITE SLO	PE TERRAIN AVERAGE SLOPE
09 FLOOD PCTENTIAL	110		HOTEL SE	
SITE IS IN N/A YEAR FLO	OODPLAIN SITE IS ON B	ARRIER ISLAND, COAST	AL HIGH HAZARD AREA. RI	VERINE FLOODWAY
1 DISTANCE TO NETLANDS . 5 acre mine	mumi	12 DISTANCE TO CR	ITICAL HABITAT for encangered so	ecest)
ESTUARINE	OTHER		N/A	(mu)
A. N/A (mi)	B. N/A (mi)	ENDANGER	RED SPECIES:	
13 LAND USE A JICINITY				
A. 0.10 (mi)		(mi)	c. <u>N/A</u>	N . A (mi)
the northeast. The	urface at the site is e site is underlain by d and salt, and fractuter is 3-4 feet and the	r approximatel red shale bed	y 10 feet of the Brock of the Bro	ill material, inswick formation.
()				
20				
	N (Cre specific relevences, e.g., state lifes, serrole a			
USGS Quad Map- El NJDEP Water Suppl	er Characterization Ro izabeth Quad (Map 1) y Overlay map (Map 5 ation Map (Map 7)		viv Associates	(Ref.A)

\$EPA		POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 6 - SAMPLE AND FIELD INFORMATION		01 STATE 02 SITE NUMBER	
IL SAMPLES TAKE	EN				
SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO		03 ESTIMATED DATE RESULTS AVAILABLE	
GROUNDWATER 5		Gollob Analytical, Berkeley Hei ETC Laboratory, Edison, NJ	available		
SURFACE WATER					
WASTE	10	EPA Edison, Edison, NJ		available	
AIR					
RUNOFF					
SPILL					
SOIL	78	Gollob Analytical, Berkeley Hei ETC Laboratory, Edison, NJ	ghts, NJ	available	
VEGETATION					
OTHER					
III. FIELD MEASUR	EMENTS TAKEN				
O' TYPE T GROUNS		02 IN CUSTODY OF			
SAMAES	04 LOCATION OF MAPS	(Name of organization of indirect	JUE!!		
C YES					
	ATA COLLECTED Provide narrative	descroipni			
VI. SOURCES OF IN	FORMATION -Cite specific reference	s e g. state lives, sample analysis, reponst			
EPA ins	pection and sampl	ing episode (ref. A)		3.5	

			PARENT COMPANY #	ONC SCHOOL	
Bayonne Barrel & D		02 D+B NUMBER	OB NAME		RABMUN 6 + 0 PO
154 Raymond Blvd.		04 SIC CODE 3412	10 STREET ADDRESS (P 0 Bos.	9FD € VIC I	11 SIC CODE
scity Newark	OB STATE NJ	07 ZIP CODE 07 105	12 CITY	13 STATE	14 ZIP CODE
Frank Langella		02 O+8 NUMBER	OB NAME		09 D+8 NUMBER
3 STREET ADDRESS P D. Box. AFO F. enc.		04 SIC CODE	10 STREET ADDRESS P 2 801.	RFO e, erc.)	I I SIC CODE
154 Raymond Blvd.			The second second	Sec. 1.77.	
DS CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
Newark	NJ	07105			
I NAME.		02 D+8 NUMBER	OB NAME		PARMUN B-C PO
3 STREET ADDRESS . O Box RFD . etc.)		04 SIC CODE	10 STREET ADDRESS > 0 Box.	RFO * etc.;	1 : SIC CCCE
S CITY	06 STATE	D7 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
NAME		02 D+8 NUMBER	OB NAME	J	090-8 NUMBER
DO STREET ADDRESS P.O. Bas, AFD + MC.I		04 SIC CODE	10 STREET ACCRESS P O. Bos. AFD F. arc.)		1 I SIC CODE
ă CITY	D6 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
II. PREVIOUS OWNER(S) List most		02 D+8 NUMBER	IV. REALTY OWNER(S)	acorcable, las most recent fests	02 0+B NUMBER
Colville Bros., In					
3 STREET ADDRESS P O. Box, RFD P. BIC.		04 SIC CODE	03 STREET ADDRESS (P.O. Box. RFD #, MC.)		04 SIC CODE
SCITY	OBSTATE	07 ZIP CODE	05 CITY	DB STATE	07 ZIP CODE
B & F Co. Inc.		02 D+B NUMBER	01 NAME 02		02 D+8 NUMBER
STREET ADDRESS IF O BOX, RFD #. MC.)		04 SIC CODE	O3 STREET ADDRESS(P O. Box, AFO #, etc.)		04 SIC CODE
COLA	08 STATE	O7 ZIP CODE	os CITY	06 STATE	07 ZIP CODE
NAME		02 D+8 NUMBER	O1 NAME		02 D+B NUMBER
STREET ADORESS P O. BOTTARD P. MC.)		04 SIC CODE	03 STREET ADDRESS (P O. Box.	AFO . etc.)	D4 SIC CODE
CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
SOURCES OF INFORMATION		F WALLEY TO SELECT			
SOURCES OF INFORMATION	Cae specific references.	e.g., state /dea, sample analys	us, reports)		_

≎EPA			SITE INSPE	ZARDOUS WASTE SITE PECTION REPORT RATOR INFORMATION			
II. CURRENT OPERATO	R i Provos e delerent in	un owner)		OPERATOR'S PARENT COM	IPANY (Facoscación)		
Site inact	:ive	02	2 O+B NUMBER	10 NAME	1.5	1 D+B NUMBER	
03 STREET ADDRESS (P.O. So.	AFD +, BIC.)		04 SIC CODE	12 STREET ADDRESS (P.O. Bos. RFD #	, etc.)	13 SIC CODE	
05 CITY		06 STATE 0	7 ZIP CODE	14 CITY	15 STATE 1	6 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER	5					
III. PREVIOUS OPERATO	OR(S) (Lat most recent)	lest; pronde only i	different from pener)	PREVIOUS OPERATORS' PA	RENT COMPANIES III	porcebe	
Bayonne Ba	arrel & Dru	ım Co.	2 D+B NUMBER	10 NAME		1 D-B NUMBER	
03 STREET ADDRESS IP.O. 80.	nd Blvd.		04 SKC CODE 3412	12 STREET ADDRESS (P.O. Bos. RED	. 4rc.)	13 SIC CODE	
os cmy Newark		06 STATE O		14 CITY	15 STATE	16 ZIP CODE	
	09 NAME OF OWNER	I was a little	ERIOD				
1945-1982	Frank La	ngella					
01 NAME		02	2 D+B NUMBER	10 NAME		11 D-B NUMBER	
03 STREET ADDRESS (P.O. Box. RFD F. BIL.)			04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD F. BIC.)			
DS CITY		DE STATE O	7 ZIP COD€	14 CITY	15 STATE	16 ZIP CODE	
D8 YEARS OF OPERATION	OF NAME OF OWNER	DURING THIS	PERIOD				
		0	2 D+8 NUMBER	10 NAME		11 D-B NUMBER	
DI NAME	03 STREET ADDRESS (P.O. Box. RFD #. MC.)			12 STREET ADDRESS IP.O Box RFD# . etc.)			
	RFD # . etc.,		04 SIC CODE	12 STREET ADDRESS (P.O Box RFD)	. etc.)	13 SIC CODE	
03 STREET ADDRESS (P.O. Box	, RFD # . etc.;	06 STATE 0		12 STREET ADDRESS (P.O Box RFD)		15 SIC CODE	
D3 STREET ADDRESS (P.C. Box			7 ZIP CODE				
D3 STREET ADDRESS (P.C. Box	RFD # . etc.,		7 ZIP CODE				

SEPA		POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 9 - GENERATOR/TRANSPORTER INFORMATION			
II. ON-SITE GENERATOR					
Bayonne Barrel & Dru	m, Co.	02 D+8 NUMBER			
154 Raymond Blvd.		04 SIC CODE 3412	ī		
oscity Newark	06 STATE NJ	07 ZIP CODE 07 105			
III. OFF-SITE GENERATOR(S)	-1-				
O1 NAME		02 D+B NUMBER	01 NAME		02 D+8 NUMBER
03 STREET ADDRESS (P O Box, RFD A, etc.)		04 SIC CODE	03 STREET ADDRESS IP Q. Box, 9FD # MC.1		04 SIC CODE
OSCITY	G6 STATE	07 ZIP CODE	05 CITY	06 STATE	O7 ZP CODE
01 NAME		02 D+B NUMBER	O1 NAME		02 D - 8 NUMBER
DO STREET ADDRESS (P.D. Bost, RFD *, etc.)		04 SIC CODE	03 STREET ADDRESS -P O. Box. RFD + BIC.;	03 STREET ADDRESS -P O. Sor. RFD + stc.;	
OS CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
IV. TRANSPORTER(S)					
OT NAME		02 D+8 NUMBER	01 NAME		02 D-B NUMBER
33 STREET ADDRESS .P O, Box. RFO P. MC./		04 SIC CODE	03 STREET ADDRESS IP D. Box. RFD #. NC.)	-	04 SIC CODE
DS CITY	06 STATE	07 ZIP CODE	Q5 CITY	06 STATE	07 ZIP CODE
I NAME		02 0+8 NUMBER	O1 NAME		02 D + 3 NUMBER
03 STREET ADDRESS .P O. Box. RFD #, exc.)		04 SIC CODE	03 STREET ADDRESS (P O. Box. RFD *. etc.)	7	04 SIC CODE
DS CITY		07 ZIP CODE	los city	los or er	07 ZIP CODE

Y. SOUNCES OF INFORMATION (Cae specific references, e.g., state fles, sample analysis, reports)

\$EPA

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION 01 STATE 02 SITE NUMBER

II. ENFORCEMENT INFORMATION

OI PAST REGULATORY ENFORCEMENT ACTION X YES - NO

02 DESCRIPTION OF FEDERAL STATE LOCAL REGULATORY/ENFORCEMENT ACTION

An EPA Consent Agreement issued in 1984 cited Bayonne Barrel and Drum Company, for operation of a hazardous waste facility and storage of hazardous wastes without a hazardous waste permit, in violation of RCRA regulation. The facility was required to conduct an investigation of contamination and submit a closure plan for the facility. The US Justice Department has filed a suit against the company and its president, Frank Langella, for RCRA violations and failure to comply with the terms of the Consent Agreement signed with EPA. The case is presently in litigation.

III. SOURCES OF INFORMATION (Cae specific references, e.g., state lies, sample analysis, reports)

EBA Consent Order (ref. Q)



Site Inspection Report

BAYONNE BARREL AND DRUM COMPANY 154 RAYMOND BLVD. NEWARK, ESSEX COUNTY, N.J.

EPA ID# NJD 009871401 ;

Hours: 25

0	_	n	Λ
-	-	~	Δ
~	_	•	

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

1. IDENT	FICATION
0) STATE	22 SITE NUMBER

77	PART1-SI	TE LOCATION AN	ND INSPI	ECTION INFOR	MATION			
II. SITE NAME AND LOCAT	ION		n 20					
CHEFENAVE CASA TETT 1 TOR	impose temporary		CZ STREET, ROUTE NO OR SPECIFIC LOCATION IDENTIFIER					
Bavonne Barrel	and Drum Co.		154 Raymond Blad					
630.71			DA STAT	E 0571P CODE	06 COUNT	CODE C:		
Newark		× 10	NJ		Essex	- 1 2.2		
GE COOPONATES					I C STATE I D COUNT	Y I E MUNICIPAL		
		_ E F OTHER		EDERAL	I G UNKNO	WN		
III. INSPECTION INFORMA	CZ SITE STATUS	03 YEARS OF OPER	RATION					
6-2-88	= ACTIVE		1945	1 1982	UNKNOWN			
MONTH DE 1645	X INACTIVE	86	GINNING YE	AR ENDING YE				
X A EPA E B EFA CON				MINICIPAL TO	MUNICIPAL CONTRACTOR			
TE STATE TE STATE OF	The state of the s	Marketin			Raviv Associates	184-45-1-		
SECHIEFINSPECTOF	Q 11111011011	GE TITLE		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	G7 ORGAN ZATION	DE TELEPHONE NO		
,: Chie- Marec Q-		Ge ince			Ur Ondais Lation	1 1		
Site Inspection	Review	10 11115			11 ORGANIZATION	12 TELEPHONE NO		
JE O MENINSMECTORS		70 1172			11 010 12 10 1	()		
	_				***	100 000		
						1 1_		
			-					
						t 1		
					- F			
						f 1		
					-			
						()-		
SITE REFRESENTATIVES INTER	RHEWES	14 TITLE		15ADDRESS	A. (a. (a. (a. (a. (a. (a. (a. (a. (a. (a	16 TELEPHONE NO		
Frank Langella		Presiden				1 1		
		555		Hyd.				
				1		T T		
						III Comment		
						T I		
						0.00		
						1 1		
			1			(-)		
15.	, 1+L					- A		
						()		
						15-6		
17 ACCESS GAINED BY	B TIME OF INSPECTION	19 WEATHER CO	NOITIONS					
(Check one	o interest	To the section	11000					
☐ PERMISSION ☐ WARRANT								
C WARRANT	BLE FROM					1		
C WARRANT IV. INFORMATION AVAILA	BLE FROM	02 OF JAGONEY DIG	yanizalion,			03 TELEPHONE NO		
	BLEFROM	100000000000000000000000000000000000000		ence and M	onitoring Branc	1		
C WARRANT IV. INFORMATION AVAILA 01 CONTACT		100000000000000000000000000000000000000	rveill	ence and M	Onitoring Branc	h 201 321-677		

EPA FORM 2070-13 17-61,

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POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 2- WASTE INFORMATION

1. IDENTIFICATION

9: STATE | DOZ SITE NUMBER

DO09871401

II. WASTES	TATES, QUANTITIES, A	NO CHARACTER	ISTICS					
True .			ol waste duantenet maepenaent,	PROPERTY OF THE SOLUBLE OF THE STOUS OF THE			XXI MISHLY VOLATILE S = J EXPLOSIVE E K REACTIVE = L INCOMPATIBLE	
Z D OTHER		NO OF DRUMS	1500 100 - 150	TO PERSS	TENT & H KONT		PPLICABLE	
III. WASTET	YPE	1		-				
CATEGORY	SUBSTANCE A	NAME	DI GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS			
(SLU)	SLUDGE		1.500			udge_nile		
OLW	OILY WASTE		70,000	gallons		sludge stor.	age tanks	
(SOL)	SOLVENTS		unknown	-	OII diid	7	-0-	
PSD	PESTICIDES		-					
(occ)	OTHER ORGANIC CO	HEMICALS	unknown					
1000	INORGANIC CHEMIC		directowit					
ACD	ACIDS	-						
BAS	BASES				-			
MES ?	HEAVY METALS		- 100-4000					
	OUS SUBSTANCES S. A	Downey by most forguest	unknown				-	
O1 CATEGORY	02 SUBSTANCE N		03 CAS NUMBER	04 STORAGE DISPOSAL METHOD		05 CONCENTRATION	06 MEASURE OF	
SOL	benzene		71-43-2	Groundwater Samples		28	ppb	
SOI.	chlorobenzene		108-90-7	* Concentration		67	ppb	
COL	ethybenzene		100-41-4	shown are the		1,060	ppb	
)L	toluene		108-88-3	highest levels		150	ppb	
SOL	xvlene		1330-20-7	detected in		2,000	ррь	
SOL	diethyl ether			groundwater		30	pob	
SOI						90	daa	
OCC	isoprophyl her			samples.		150	ppb	
occ	n-propvibenzer di-n-butvlphtl		84-74-2		- 1	28	ppb	
000	napthalene	larrace	91-20-3			14	ppp	
occ	cvclohexane		110-82-7			60	ppb	
OCC	cycloheptane		110-02-7	-			1.4.7.	
		- 25				100	ppb	
OCC	2.4-dimethylph	nenol	105-67-9			860	ppb	
OCC	phenol		108-95-2			877	ppb	
						14.0		
4								
V. FEEDSTO	CKS ISAA ADDARDU TO CAS ALMOS	eret					1-1-1	
CATEGORY	0: FEEDSTOCK	KNAME	02 CAS NUMBER	CATEGORY	, OI FEEDSTO	OCKNAME	02 CAS NUMBER	
FDS				FOS				
FDS				FDS	-			
FDS		× 5 5		FDS				
FDS				FOS			-	
	OF INFORMATION CO.							

oil and Groundwater charaterization Report- Dan Raviv Associates (Ref. B)
Sampling in Proposed NJ Turnpike Right-of-Way- Louis Berger Associates (Ref. C)

EPA FORM 2070-13 (7-61)

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POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

1.000	IFICATION
NJ STATE	°6569871401

	STATES, QUANTITIES, AND CHARAC	DUANTITY AT SITE	DA WASTE CHARACT	ERISTICS CANCE ME	1 10071	
T.Y. SOUD TE SLURRY THE POWDER FINES THE TOURS TONS TONS TONS TONS TONS TONS TONS TONS		PDS	C A ADVOCTIVE C		SOLUBLE I HIGHLY VOLATILE MIFECTIOUS IJ EXPLOSIVE FLAMMABLE I MICOMPATIBLE I MICOMPATIBLE I MICOMPATIBLE I MICOMPATIBLE	
7 (1)	(Soucer) NO OF DRU	ins				
III. WASTE						
CATEGORY	SUBSTANCE NAME	DI GROSS AMOUNT	OZ UNIT OF MEASURE	03 COMMENTS		
SLU	SLUOGE		-			
OLW	OKY WASTE					
SOL	SOLVENTS					
PSO	PESTICIDES					
occ	OTHER ORGANIC CHEMICALS					
юс	INORGANIC CHEMICALS					
ACD	ACIDS	O				
BAS	BASES					
MES	HEAVY METALS					
IV. HAZARD	OUS SUBSTANCES See ADDRESS TO MOSE TO	TOWNEY CARD CAS Humbers				
OI CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	D4 STORAGE DISP	POSAL METHOD	05 CONCENTRATION	DE MEASURE DE
SOL	benzene	71-43-2			265	ppb
SOL	chlorobenzene	108-90-7	Soil Samples		650	ppò
SOL	ethylbenzene	100-41-4			8,000	ppb
SOL	1,1-dichloroethane	75-34-3			1,000	ppb
SUL	1.2-dichloroethylene	25323-30-2	* Concentra	tions	1,100	100
SOL	methylene chloride	- 75-09-2	shown are		740	ppb
SOL	1,1,1-trichloroethan	13-03-2	highest levels		850	ppb
SOL	trichloroethylene	79-01-6	detected in soil		830	ppb
SOL	toluene	108-88-3	samples.		14,000	ppb
SOL	xylene					
SOL		1330-20-7			9,600	ppb
SOL	methyl ethyl ketone methyl isobutyl keto	78-93-3			730	ppb
SOL		ne 105-44-2 100-42-5			450	ppb
OCC	styrene	83-32-9			19,600	ppb
OCC	anthracene					Ppo
	The state of the s	120-12-7			15,300	ppb
occ	benzo (a) anthracene	56-55-3			22,000	ppb
V. FEEDSTO	CKS (See Accords to CAS Aurocon)					
CATEGORY	OI FEEDSTOCK HAME	G2 CAS NUMBER	CATEGORY	DI FEEDS	TOCK NAME	02 CAS NUMBER
FDS	T - 401/14	- T	FDS			
FDS			FDS			
FDS			FDS			
FDS		FDS				

oil and Groundwater Charaterization Report-Dan Raviv Associates (Ref. B)
Sampling in Proposed N.J. Turnpike Right-of-Way---Louis Berger Associates (Ref.C)

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POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 2 - WASTE INFORMATION

	FICATION
01 STATE	°° 5009871401

EN SOLID E E SLURRY E B POWDER FINES E F LOUID E C SLUDGE E GAS CUBIC YARDS		C A TOXIC		UBLE I MIGHLY CTIOUS I J EXPLOS MMABLE I K REACT TABLE I L MICOM	SIVE		
2 0 OTHER	(Soece);	NO OF DRUMS				÷ @ 41€1/29	- Condition
III. WASTET	YPE						
CATEGORY	SUBSTANCE	HAUE	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS		
SLU	SLUDGE						
OLW	OILY WASTE						
SOL	SOLVENTS						
PSD	PESTICIDES						
occ	OTHER ORGANIC CH	HEMICALS					
юс	INORGANIC CHEMIC	CALS					
ACD	ACIOS						
SAS	BASES						
MES	HEAVY METALS						
IV. HAZAROO	OUS SUBSTANCES See A	agency for most frequent	n care Cas monore:				
O1 CATEGORY	02 SUBSTANCE N	IAME	OJ CAS NUMBER	04 STORAGE/DISP	POSAL METHOD	05 CONCENTRATION	DE MEASURE OF
occ ····	benzo(a) pyre	ne	50-32-8			18,000	ppb
OCC	benzo (b) flu	oranthene	207-08-9	Soil Samples		23,000	ppb
- "	benzo (g,h,i)		191-24-2			4,000	ppb
- 000	bis(z-ethylhe			-7 * Concent	trations	290,000	ppb
occ	butyl benzyl	phthaliate	85-68-7	snown are the		30,100	bhp
occ	chrysene		218-01-9	highest le	vels	24,400	ppb
OCC	1,4-dichlorob	enzene	25321-22-6	detected in soil		11,800	ppb
occ	diethyl phtha	allate	84-66-2	samples		11,500	ppb
OCC	dimethyl phth		131-11-3			22,000	ррь
occ	di-n-butyl ph	thallate	84-74-2			87,900	ppp
OCC	fluoranthene		206-44-0			35,900	ppb
OCC	fluorene		86-73-7		· 3	29,300	ppb
OCC	napthalene	3 1	91-20-3			191,000	ppb
OCC	phenanthrene		85-01-8			80,800	ррь
occ	pyrene	*	129-00-0			56,200	ppb
OCC	1,2,4-trichlore	obenzene	120-82-1			24,700	ppb
V. FEEDSTO	CKS ISHA ADDRESS BY CAS MARKE	64)					
CATEGORY	01 FEE:00	XNUE	02 CAS NUMBER	CATEGORY	OI FEEDS	TOCK NAME	DE CAS NUMBER
FDS		2 -1 -1		FDS	en en		
FDS		-		FDS			
FDS				FDS			
FDS	1			FDS			

1 and Groundwater Charaterization Report- Dan Raviv Associates (Ref. B) Sampling in Proposed N.J. Turnpike Right-of-Way - Louis Berger Associates (Ref. C)

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POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 2 - WASTE INFORMATION

I. IDENTIFICATION

OF STATE OF SITE NUMBER

N. I. DOOG 8.7.1 / O.1

			72012 10201				
	TATES, QUANTITIES, AN	02 WASTE QUANT		O1 WASTE CHARACT	FRISTICS (Chart of the or		
		V waste quentees			OLATILE		
			. ⊆ в coqao	SIVE L F INFECT	DOUS I EXPLOS	IVE	
C C. SLUDGE		CUBIC YARDS _		C RADIOA		BLE IL MOOME	PATIBLE
C D. OTHER						I M NOT AP	PLICABLE
	(Soec#y)	NO. OF DRUMS		L			
III. WASTE T							
CATEGORY	SUBSTANCE N	AME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS		
SLU	SLUDGE		ļ				
OLW	OILY WASTE				<u>.</u>		
SOL	SOLVENTS						
PSO	PESTICIDES						
occ	OTHER ORGANIC CH	IEMICALS					
IOC	INORGANIC CHEMIC	ALS					
A.C.D	ACIDS						
BAS	BASES						
MES	HEAVY METALS						
IV. HAZARD	OUS SUBSTANCES See AS	pendus for most frequent	y caed CAS Numbers				-
01 CATEGORY	02 SUBSTANCE N	02 SUBSTANCE NAME		04 STORAGE DISPOSAL METHOD		05 CONCENTRATION	06 MEASURE OF
-NES	arsenic		7440-38-2			390	ррш
MES	cadmium		7440-43-9	Soil Samples		1,300	ppm
3	chromium		7440-47-3			3,400	ppm !
- 25	copper		7440-50-8	* Concentr	ations	15,000	מתכם
MES	lead		7439-92-1	shown are the highest		8,400	ррш
MES	mercury		7439-97-6	levels detected in		13.6	ppm
MES	zinc		7440-66-6	soil samples.		5,040	ppm
					:		
SOL	ethybenzene		100-41-4	waste ash	nile	5,200	pha
SOL	trichloroethy	lene	79-01-6	samples		490	ppb
SOL	tetrachloroet		127-18-4			1,300	ppb
SOL	toluene		108-88-3			12,000	ppb
SOL	xylene		1330-20-7			4,600	ppb
SOL	styrene		100-42-5			2,500	ppb
occ	arochlor 1248		12672-29-6			293,970	ррь
OCC							
	arochlor 1254		11097-69-1			115,400	l ppb
	CKS (See Appendix for CAS humb						00.010.110.000
CATEGORY	01 FEEDSTOC	K NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTO	XX NAME	02 CAS NUMBER
FDS		<u> </u>		FDS			
FDS				FDS			
FDS				FDS			
FDS			L	FDS			·
VI. SOURCES	S OF INFORMATION 1040	specific references e g	State hes samore energies	(anoqua)		4, -	
			•				-

Investigation and Sampling Episode (Ref. A)

5011 and Groundwater Characterization Report-Dan Raviv Associates (Ref. B)

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POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 2 - WASTE INFORMATION

I. IDENTIFICATION					
DI STATE	DZ STE NUMBER				
MI	0009871401				

II. WASTES	TATES, QUANTITIES, A	NO CHARACTE	RISTICS					
OI PHYSICAL!		1000 CUBIC YARDS	of eldie outment to mountainers	C A TOXIC C B COARO C C RADIOA C D PERSIS	CTIVE I G FLAMMABLE I K REACTIVE		SIVE IVE PATIBLE	
_ D CINEN	(Specify)	NO OF DRUMS						
III. WASTE T	YPE							
CATEGORY	SUBSTANCE	NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS			
SLU	SLUDGE							
OLW	OILY WASTE							
SOL	SOLVENTS							
PSD	PESTICIDES							
осс	OTHER ORGANIC C	HEMICALS						
юс	INORGANIC CHEMIC	CALS						
ACD	ACIOS							
BAS	BASES							
MES	HEAVY METALS							
IV. HAZARD	OUS SUBSTANCES SALA	poends for most frequen	thy case CAS Municers					
DI CATEGORY	02 SUBSTANCE N		03 CAS NUMBER	04 STORAGE DISA	OSAL WETHOO	05 CONCENTRATION	06 MEASURE OF	
	benzene		11-43-2-	aqueous	drum sampl	92,000	-bb0	
SOL	chlorobenzer	16	108-90-7			78,000	ppò	
- 1	ethylbanzene		100-41-4			1,200,000	ppb	
SUL	tetrachloroe		127-18-4			62,000	PPD	
SOL	xvlene	211, 2011	108-88-3			10,000,000	PPb	
SUL	toluene		1220 20 3			2,400,000	ppo	
SOL I								
OCC	1,3-dichlore	hangana	25321-22-6	-		2,610	ppb	
OCC 1	1,4-dichlore		25321-22-6	-		34,200	ppb	
000	1,2-dichlore		25321-22-6			167,140	ppb	
occ I	napthalene		91-20-3			28,380		
occ.: I					_	567	ppb	
OCC.	dibenzofurar		132-64-9			597	ppb	
000	2.4-dimitrotol	uene	121 14 2			221		
	-							
							-	
V. FEEDSTO	CKS is a source of CAS mano	479)						
CATEGORY	01 FEEDSTOO	KNAME	02 CAS NUMBER	CATEGORY	D1 FEEDSTO	OCK NAME	02 CAS NUMBER	
FOS				FDS				
FDS				FDS			-	
FOS				FDS				
FOS				FDS				
VI SOURCES	OF INFORMATION CO	THE COLUMN TWO	WANTED TO STATE OF THE PARTY.					

L. A Investigation and Sampling Episode (Ref. A)

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POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

I. IDENTIFICATION

OF STATE OF STE NUMBER

DO09871401

II. HAZARDOUS CONDITIONS AND INCIDENTS	· · · · · · · · · · · · · · · · · · ·
01 \$ A. GROUNDWATER CONTAMINATION 03 POPULATION POTENTIALLY AFFECTED:	02 DOBSERVED DATE JULY 1986) POTENTIAL CALLEGED 04 NARRATIVE DESCRIPTION
Groundwater beneath the site hydrocarbons and PCB's.	is contaminated with vol_atile organics, petroleum
rydrocarbons and rob s.	Ref. B
01 AB SURFACE WATER CONTAMINATION 03 POPULATION POTENTIALLY AFFECTED:	02 COBSERVED 10ATE. 1 No POTENTIAL CALLEGED 04 NARRATIVE DESCRIPTION
생생하면 그 전에 가입니다 하지만 되었다. 그렇게 되었다면 하고 있어 되는 것이 되었다면 하지 않는데 생각하다.	ation of surface run-off from site into the Passaic
River via storm sewers. Samples	of a wastewater discharge into a storm sewer at the
facility in 1982 showed contamin	nation with violatile organic compounds. Ref. E,S
01 \$\tilde{\tilde{\tilde{L}}} C. CONTAMINATION OF AIR 03 PCPULATION POTENTIALLY AFFECTED:	02 I OSSERVEDICATE) XX POTENTIAL I ALLEGED
Potential exists due to docum	mented volatile organic contamination throughout the
site. Strong odors have been not	ted by highway construction workers adjacent to the
site.	Ref. B,L
01 \$ 5 FIRE EXPLOSIVE CONDITIONS	02 TOBSERVEDIDATE XX POTENTIAL TALLEGED
03 FORULATION POTENTIALLY AFFECTED:	04 NARRATIVE DESCRIPTION
	oling episode in 1988 reported 100-150 drums stored in
	Drum and ash samples showed volatile organic otential fire or explosive hazard. Brush fires were
eported at the site in 1985 and	
OKI E. DIRECT CONTACT	02 CRSERVED (DATE.) A POTENTIAL CALLEGED
03 POPULATION POTENTIALLY AFFECTED:	
	is low since the facility is inactive and surrounded
	ial area is about ½ mile away, however there is a
V.J. Turnpike.	ay construction workers along Route 1 and 9 and the Ref. A.L
01 X F CONTAMINATION OF SOIL	02 X OBSERVED DATE July 1986) POTENTAL TALLEGED
D3 AREA POTENTIALLY AFFECTED:	G4 NARRATIVE DESCRIPTION
	s of contamination with volatile organics,
petroleum hydrocarbons, PCB's an	
	Ref. B
01 Z G. DRINKING WATER CONTAMINATION	02 T OBSERVED IDATE T POTENTIAL T ALLEGED
03 POPULATION POTENTIALLY AFFECTED:	04 NARRATIVE DESCRIPTION
	since groundwater in the area is not used for drinking.
	nts could affect the Brunswick formation, which
s used for industrial purposes	in the Newark area. Ref. B Maps 5 & 7
01 % H. WORKER EXPOSURE/MURY 03 WORKERS POTENTIALLY AFFECTED:	02 TOBSERVED (DATE:) XT POTENTIAL TALLEGED OF NARRATIVE DESCRIPTION
Past employees may have been	exposed to hazardous substances due to sloppy
	practices and documented contamination on-site.
urrently, there are a few secur	rity and maintenance personnel present at the facility. Ref. A,B
01 XI. POPULATION EXPOSURE INJURY	02 C OBSERVED (DATE:) X POTENTIAL C ALLEGED
Potential for population expo	O4 NARRATIVE DESCRIPTION OSUTE is low since the nearest residential area is
	is fenced in, however there is a potential for off-site
contamination and population exp	
current and bobaracton ext	
	Ref.

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POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

LIDENTIFICATION

II. HAZARDOUS CONDITIONS AND INCIDENTS (Contracto		
01 XJ DAMAGE TO FLORA 04 NARRATIVE DESCRIPTION	02 T OBSERVED (DATE	
Potential migration of contam	그렇으면 이번 선생님들은 보이 이렇게 하는 것이 되었다면 하다 하다.	nd storm sewers may
have adverse impact on Passaic I		ef, S
OINT K DAMAGE TO FAUNA ON NARRATIVE DESCRIPTION INCLUDE NAME OF TAPE OF	02 TOBSERVED (DATE	X POTENTIAL _ ALLEGED
Potential migration of contamin	nants via surface run-off an	d storm sewers
may have adverse impact in Passa		Ref. S
01XXL CONTAMINATION OF FOOD CHAIN 04 NARRATIVE DESCRIPTION	02 T OBSERVED (DATE	\$ POTENTIAL ALLEGED
Potential exists due to document		ion at site. ef. B
01XX M UNSTABLE CONTAINMENT OF WASTES 15.007 PUNDE SIGNOFF FOUNT LEARNE STATE 02 POPULATION POTENTIALLY AFFECTED.	02 TOBSERVED (DATE TUDE 1988	_ POTENTIAL _ ALLEGED
Ash piles in the rearof the procontrol.	perty do not have adequate	containment or runoff . Ref. A
DIVEN DAMAGE TO OFFSITE PROPERTY	02 TOBSERVED DATE July 1986	I POTENTIAL I ALLEGED
Contamination related to past op proposed N.J. Turnpike Right-of-	-Way adjacent to the eastern	site boundry. Ref. C
of No contamination of sewers storm brains wo harrative description Samples of a wastewater discharg volatile organic contamination. River.	ge into a storm sewer at the The storm sewer reportedly	facility in 1982 shower
DIXX P ILLEGAL UNAUTHORIZED DUMPING DA NARRATIVE DESCRIPTION	02 OBSERVED DATE June 1988	I POTENTIAL I ALLEGED
Ash piles are stored on open grindicate that the material is EF		
DESCRIPTION OF ANY OTHER KNOWN POTENTIAL OR	ALLEGED HAZARDS	
An estimated 30,000 drums are The drums are reported to be emp	ty, however some may contai	
II. TOTAL POPULATION POTENTIALLY AFFECTED:		
V. COMMENTS		
EPA Inspection and Sampling Epise Soil and Groundwater Characteriz Sampling in Proposed N.J. Turnpi	ation Report-Dan Raviv Assoc	
SOURCES OF INFORMATION CON MESTIC PROPERTY OF A PARTY OF THE PROPERTY OF THE P	ine: sampe analysis reports	
'ludge and Liquid Sampling Resul JDEP Incident NOtification Repo EPA Pollution Report on Fire Inc NJDEP Site Inspection Name (Ref.	ts-1982 (Ref. E) rts (Ref.L,M) ident (Ref. N)	

EPAROGRAZO70-1317-811 NJDEP Hazardous Waste Investigation Reports (Ref. S)

POTENTIAL HAZARDOUS WASTE SITE

Ī	1. IDENT	TEICATION
	OLSTATE	°° DG89871401

OI TYPE OF PERMIT ISSUED	DZ PERMIT NUMBER	OJ DATE ISSUED	04 EXPIRATION DATE	05 CCMMENTS	
X- A NPOES	NJ0064068	2-15-88 2-28-90		inactive	15E sanitary land
I 8, UIC			7	20002270	130 Dunitedly Talk
XC C AIR	plant TD#05103		and the f		
ED RCRA	prant to-unite		expired		
TE. RCRAINTERIM STATUS					
TF SPCCPLAN					
I G. STATE SONORY					
TH. LOCAL SOCON					
ZI. OTHER SHEET					
I J. NONE		-			
III. SITE DESCRIPTION					
ME. TANK BELOW GROUND 5.0	000 gallo	ns XX	D. BIOLOGICAL XX. WASTE OIL PROCESSING F. SOLVENT RECOVERY G. OTHER RECYCLING RECOVERY H. OTHER		06 AREA OF SITE -
I F LANCFILL I G. LANDFARM I H. OPEN DUMP I I. OTHER		I I G	OTHER RECYCLING	RECOVERY	
C CLANDFARM C H. OPEN DUMP C I. OTHER DISCOMMENTS Old- Ash pile in rear of Old- Drums located insi stacked in rear of Old- Oil and sludge sto Ole- Wastewater holding O4A and E: Incinerator	de building ne property, reperse tank.	approxima ar incine ortedly e	other recycling other see tely 225' x rator area; ampty.	SO' x 4'.	Acret)
G LANDFARM H. OPENDUMP II. OTHER OT COMMENTS Old- Ash pile in rear of OlC- Drums located insi stacked in rear of OlD- Oil and sludge sto OlE- Wastewater holding O4A and E: Incinerator V. CONTAINMENT	de building ne property, reperse tank.	approxima ar incine ortedly e	other recycling other see tely 225' x rator area; ampty.	SO' x 4'.	Accept
IG LANDFARM I H. OPEN DUMP I LOTHER SECON. OT COMMENTS Old- Ash pile in rear of OlC- Drums located insi stocked in rear of OlD- Oil and sludge sto OlE- Wastewater holding O4A and E: Incinerator V. CONTAINMENT I CONTAINMENT CF: WASTES: CARCA MARK.	de building ne property, reperse tank.	approxima ar incine ortedly e	other recycling other set tely 225' x rator area; ampty.	SO' x 4'. an estimate	Acres

OI WASTE EASILY ACCESSIBLE: CYES C NO 02 COMMENTS

Facility is surrounded by a fence to prevent access and is also inactive.

VI. SOURCES OF INFORMATION ICE SOCIE INFORMATION ICE SOCIETATION OF STATE AND STATE OF STATE

EPA Inspection and Sampling Episode (Ref. A)

Soil and Groundwater Characterization-Dan Raviv Associates (Ref. B)

NJPDES Permit and Fact Sheet (Ref. J)

NJDEP/BAPC Stack Log Listing (Ref. V)

≎ EPA		SITE INSPEC ER, DEMOGRAPH			ENTIFICATION ATE OF SITE NUMBER		
II. DRINKING WATER SUPPL	Y						-
O) TYPE OF DRINKING SUPPLY		02 STATUS				0.	3 015*ANCE TO 5.TE
COMMUNITY A	FACE WELL R B C D C	ENDANGER	ED AFFE	=	MONITORED C :C F C	A	20-25
III. GROUNDWATER							
OF GROUNDWATER USE IN VICINITY	Crest ore						
Z A ONLY SOURCE FOR DRING	Orre towers a	INDUSTRIAL IRRIGATIO	ILA	IMMERCIAL	INDUSTRIA: IRRIGA	TION	I D NOTUSED UNUSERELS
GZ POPULATION SERVED BY GROUP	N/A N/A		03 DISTANCE	TO NEARE	ST DRINKING WATER	well>	4.0
3-4 /#	17.7	Past	DE DEPTH TO OF CONCI		OF AGUIFER	.co	GE SOUS SOURCE ACUPES ☐ YES
09 DESCRIPTION OF WELLS -4.2.2.9					_mragpa	- 19501	
feet deep and ORECHARGE AREA I YES COMMENTS I NO	araw from the	brunswick i	11 DISCHARG		rs		
V. SURFACE WATER			TEXA.				
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POTENTIAL HAZARDOUS WASTE SITE

LIDENTIFICATION

VI. ENVIRONMENTAL INFORM						
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RUNOFF				
SPILL				
SOIL	78	Gollob Analytical, Berkeley Heig ETC Laboratory, Edison, NJ	ghts, NJ	availabl
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CTHER				
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II TYPE	02 COMMENTS			
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3 MAPS 34 LOC	ATION OF MAPS			
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VI. SOURCES OF INFORMATION CHE LORCHE PRIFERCES + 2 STALL THEE SAMORE ANALYSIS FROMES

EPA inspection and sampling episode (ref. A)

EPA FORM 2070-13 7-811

II. CURRENT OWNER(S)			PARENT COMPANY 1 MERCH	3-41 ·		
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POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 11 - ENFORCEMENT INFORMATION

1. IDENTIFICATION		ION
OI STATE	DZ SITE	MUMBER

II. ENFORCEMENT INFORMATION

OI PAST REGULATORY ENFORCEMENT ACTION X YES - NO

02 DESCRIPTION OF FEDERAL STATE LOCAL REGULATORY ENFORCEMENT ACTION

An EPA Consent Agreement issued in 1984 cited Bayonne Barrel and Drum Company, for operation of a hazardous waste facility and storage of hazardous wastes without a hazardous waste permit, in violation of RCRA regulation. The facility was required to conduct an investigation of contamination and submit a closure plan for the facility. The US Justice Department has filed a suit against the company and its president, Frank Langella, for RCRA violations and failure to comply with the terms of the Consent Agreement signed with EPA. The case is presently in litigation.

III. SOURCES OF INFORMATION (Cas specific references, e.g., state less barrole analysis, reports)

EPA Consent Order (ref. Q)



1440A Pennington Rood Trentor: New Jersey 08618 / 609-771-3616 FAX # 609-771-4276

January 4, 1990

Department of Justice Environmental Enforcement Section Room 1746 10th and Penn Ave., N.W. Washington, DC 20530

Attn: Mr. Donald Frankel, Esq.

Re: Bayonne Barrel and Drum Co.

EPA ID # NJD009871401

Dear Mr. Frankel:

Enclosed herewith please find one copy of the RCRA Closure Plan for the Bayonne Barrel and Drum Co., Newark, NJ. A copy of this plan has also been forwarded to Mr. Jim Groome, at the New Jersey Department of Environmental Protection for his review and approval.

We trust that the USEPA will find the technical approach to resolving the complex environmental issues at the Bayonne Barrel and Drum Co. site acceptable and consistent with the Agency's goals.

We look forward to an opportunity to discuss our approach at your convenience.

/Sincerely,

James E. Sailer Senior Project Manager

cc: Mr. Damon Sedita, Esq.



Foreword

Diversified Environmental Resources, Inc. was contracted to prepare this RCRA Closure Plan for the Bayonne Barrel and Drum Company (BB&D) pursuant to a consent agreement entered into between the U.S. EPA and BB&D on September 3, 1984. Environmental Risk Limited, Inc. was subcontracted by Diversified Environmental Resources, Inc. to assist in the preparation of this closure plan. This plan was prepared in accordance with 40 CFR parts 112, 197 and 351 and corresponding New Jersey Administrative Code (N.J.A.C. 7:26-9.8, 7:26-10.4(c), 7:26-10.5(h) and 7:26-10.7(I) as set forth in the Consent 7Agreement.



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1.0 INTRODUCTION

On May 20, 1982, the Bayonne Barrel and Drum Company was cited for violations of the Resource Conservation and Recovery Act (RCRA) by the United States Environmental Protection Agency (U.S. EPA). The violations cited by the U.S. EPA included the storage of hazardous waste ash without a hazardous waste permit. Two months later the company filed a petition under Chapter II of the Bankruptcy Code (II U.S.C. 101 et seq).

On September 3, 1984 the Bayonne Barrel and Drum Company entered into a Consent Agreement and Order (Docket No. II RCRA-82-0115) with the USEPA to address the violations cited on May 20, 1982. The agreement stipulated, in part, that if the Company no longer wished to continue to operate, a RCRA Closure Plan would be prepared and submitted to the U.S. EPA for review and approval.

On November 30, 1988 a preliminary Closure Plan was prepared by Interwaste Services Co. and V.J. Ciccone & Associates for Bayonne Barrel and Drum Company facility and submitted to the USEPA for review and approval. The U.S. EPA indicated that the Preliminary Closure Plan was inadequate and requested the submittal of a Closure Plan which addressed those concerns.

This Closure Plan is intended to address the U.S. EPA's request and to provide a comprehensive approach to the final closure of the Bayonne Barrel and Drum Company facility consistent with the agreement entered into with the U.S. EPA on September 3, 1984.



2.0 SITE DESCRIPTION

2.1 GENERAL

The Bayonne Barrel and Drum Company was founded in 1940 as the result of the merger of two companies; the Bayonne Barrel Company and the Export Barrel Company. During the late 1930's or early 1940's steel drums were at a premium due to the war effort and Bayonne Barrel and Drum began reconditioning steel drums. From the 1940's until the operation ceased in 1982, the reconditioning facility was developed as described in section 3.0 of this plan. In general, RCRA empty drums were received at the site for reconditioning either for specific customer re-use or for general re-sale. Although the mechanical means for handling and reconditioning drums changed over the life of this facility, the processes reportedly remained similar.

2.2 LOCATION

The Bayonne Barrel and Drum Company is located at 150 Raymond Boulevard, Essex County, Newark, New Jersey. The site is situated on approximately 14.5 acres of land. The site is bounded to the north by the Pulaski Skyway, Routes 1&9 to the west, the New Jersey Turnpike to the east and southeast, and vacant land, previously occupied by the Newark Drive-In to the south (Drawing BB-001). The site is currently comprised of two tracts of land as listed below.

Tract 1 - 8.966 Acres - Bayonne Barrel & Drum

Tract 2 - 5.539 Acres - Frank Langella, Principal of Bayonne Barrel and Drum



2.3 SOIL CHARACTERISTICS AND GEOLOGY

The site is reportedly located in an old floodplain of the Passaic River. Site topography generally slopes to the east northeast across the site. Elevations of the property range from approximately 10 feet above mean sea level (MSL) to approximately 20 feet above MSL. Surface drainage follows the topography east to a series of storm drains along the eastern property line. The storm drains were constructed during the construction of the N.J. Turnpike to re-direct the remaining flow of Harrison creek, which historically traversed this property. The storm drains are believed to discharge to the Passaic River.

The site is underlain by Pleistocene drift deposited during the Wisconsin glaciation. The drift is underlain by the Brunswick Formation. Soil lithologic data presented by Dan Raviv and Associates substantiate the presence of coal cinders and ash across the site to an average depth of ten feet below the surface elevation. Fill is reported at boring BBDC3 by Raviv to be underlain from approximately 10 feet to forty feet "by a medium to coarse grained, well sorted sand that ranges in color from brown to red-brown to dark maroon-brown. The material observed from forty to fifty feet below surface consists of a dark red-brown, uniform, coarse silt. Below fifty feet, small fragments of dark red shale were observed."

Although specific records are not available, the northern third of the property is also presumed to have been filled prior to the construction of the original buildings occupied by BB&D.

Fill material in the southern portions of the site consist of refuse of an undefined nature deposited by the City of Newark during the operations of the old Newark Landfill, currently referred to by the NJDEP as the "15E Sanitary Landfill". Fill material in the central portion of the site includes cinders and ash reportedly from a neighboring power generating facility. This material was used as a construction base for the expansion of the BB&D company.



2.4 BUILDINGS AND STRUCTURES

Nine (9) buildings currently exist at the site as shown on DWG BB-001. They are as follows:

Bldg # 1 29,000 sq.ft. Concrete block building used for the reconditioning of closed head drums, and for shot blasting open and closed head drums

Bldg # 2 2,250 sq.ft. Drum staging building for preparation for the furnace

and

760 sq.ft. Furnace for the cleaning of drums

Bldg # 3 14,000 sq.ft. Concrete and brick building used to receive open head drums immediately after cleaning in the furnace

Bldg # 4 20,000 sq.ft. Transite and steel building used for the reconditioning of open head drums

Bldg # 5 4,000 sq.ft. Paint storage building

Bldg # 6 5,400 sq.ft. Office building

Bldg # 7 9,300 sq.ft. Machine shop and maintenance garage

Bldg # 8 2,400 sq.ft. Boiler House

Bldg # 9 1,750 sq.ft. Service Building

In addition to the buildings referenced above, additional structures at the site include; a water separator trench, a 5,000 gallon separator tank, a 60,000 gallon above ground tank utilized for the settling of water prior to discharge to the sewer, two (2) underground collection tanks at the end of the furnace, and a collection/separator trench located adjacent to the furnace. Two (2) additional above ground storage tanks are located in the water separator area. These tanks were reportedly never put into service.



2.5 OPERATIONS SUMMARY

RCRA empty open head drums and closed head drums were received at the facility via truck for reconditioning. According to the owner of BB&D, drums were received from a wide variety of industries involved in the production or handling of foodstuffs, chemicals, wastes, etc. Upon receipt, the drums were staged in rows according to client and/or drum type prior to processing or were transferred directly from incoming trucks to operation areas for reconditioning.

Drums were handled on a first-in, first-out basis. Empty drum storage areas were laid out in rows in such a fashion as to store one hundred drums in each tier to facilitate inventory control.

All drums were sorted with regard to size, gauge, customer and general condition. Drums received in small quantities were stored close to the beginning of each operation. Drums were transferred from yard storage to production areas with four specially designed trucks. Yard trucks were for use on the premises only.

2.5.1 Closed Head Drum Reconditioning

Closed head drums were chemically and mechanically cleaned in the following manner:

Off-loading

Drums were transferred from incoming trucks or the drum storage areas to Building No. 1 for processing. Drums were unloaded onto a single-track conveyor where caps and bungs were removed or loosened. Labels were coated with a solvent material to facilitate removal during the washing operation. At this time drums were inspected and marked for subsequent de-denting operations.

Pre-Flusher No.1

The drums travelled on the conveyor parallel to the first pre-flusher. The pre-flusher consisted of 25 jets that projected approximately 6 inches into the interior of an inverted drum. The drums were washed in a common bath that contained approximately 4,000 gallons of detergent solution. The solutions included caustic soda mixed at a proportion of one half pound per gallon of water or other formulations.



The solution temperature was maintained between one hundred and ninety and two hundred degrees. Solution was pumped into drums with a 25 horsepower centrifugal pump delivering approximately fifty gallons per minute into each drum. Drums were left on this unit for approximately three (3) minutes. According to the owner, approximately 95% of their previous contents were removed during this process.

Pre-Flusher No.2

The drums were then conveyed to a second pre-flusher, constructed and operated similarly to the first pre-flusher. Stronger detergent or caustic solutions were utilized in this process.

Double End Chime Straightener & Re-Sealer

A single track conveyor, running parallel to the second preflusher, conveyed the drums to a star wheel that fed drums into the Double End Chime Straightener & Re-Sealer. Two sets of wheels pressed on the bottom of the chime exerting a pressure of approximately 1,500 pounds per square inch, which straightened and re-sealed the chime.

De-Denting

Upon completion of the cleaning, the drums were inspected again and previously marked dented drums were sorted and removed for de-denting. Drum temperatures raised during the cleaning operations made them more amenable to the dedenting process.

Drums were placed on a bottom dished chuck which closed the doors of the de-denting machine and sealed the top of the drum with a rubber gasket. Approximately 40 lbs of air pressure was introduced into twenty gauge drums and sixty lbs of air pressure was introduced into eighteen gauge drums for de-denting. Drums were rotated at approximately 30 revolutions per minute (RPM) while two ironing wheels contacted the rolling drum hoops and sides to facilitate the de-denting process.

Chain Insertion Area

Although the pre-flushing operation removed the majority of the prior drum contents, some drums still had evidence of prior contents. Chaining operations were utilized to remove these material through friction. Approximately fifty pounds



of chains, in lengths of approximately 3 feet, were introduced into the drum. A specially designed bung was placed in the drum in order to keep the chains from escaping and to allow the introduction of cleaning solution during the subsequent processes.



First Sub-Stripper

Drums were automatically fed into the sub-stripper by means of a star wheel at the entrance. Thereafter, drums were rotated in approximately 8 inches of hot detergent solution on individual track wheels at approximately 30 RPM. The solution tank was approximately fifty feet long and five feet wide and contained approximately 2,000 gallons of detergent solution. Steel brushes within this tank were also utilized in this process to facilitate label and paint removal in preparation for subsequent operations.

Upon completion of the first sub-stripper process, drums were transferred to an identical second sub-stripper. On completion of the second sub-stripper, drums were fed into a conveyor that raised the drums out of the solution into an up-ender. This process inverted the drums and solution was drained for re-use.

Head Chaining

Drums conveyed from the first sub-stripper were fed onto a receiving device that automatically tilted and conveyed the drums through a machine that "chained" the bottom of the head through contacting traction wheels. Drums were rotated at a rate of approximately 30 RPM during this process while being mechanically pushed from the front to the back of the machine. Upon reaching the rear of the machine, drums were automatically turned over and the other end of the drum was subjected to the same process.

Upon completion of this process, drums were automatically conveyed to the chain removal area, where chains previously inserted into the drums were removed and directed back to the chain insertion area for cleaning and inspection.

External Rinse

Drums were then conveyed into an external rinse by pusher arms where they were rotated at approximately 30 RPM and rinsed with water to neutralize and remove detergent solutions. Thereafter, drums were placed onto a turntable device that placed them onto a conveyor.



Bung Insertion Area

Drum specific bungs were placed into drums in this area. A 1/2 inch opening was left in the head of each drum for subsequent testing.

Leak De-Denting

Sealing plugs were inserted into the drums which were injected with approximately 7 pounds per square inch (PSI) of air. Drums were submerged in water solution and visually inspected for leaks.

Rinse-Matic

Drums were conveyed to a thirteen station, three rinse process "rinse-matic" machine where they were automatically rinsed, steamed, air-dried and siphoned. Thereafter, drums were automatically conveyed to a device which turned the drums over for internal inspection.

Drums that were not suitable for use as "bung type" drums, were directed to a de-heading and beading operation.

Shot Blasting

All drums were shot-blasted to remove paint and labels and insure that they were clean for proper paint adhesion. The drums were fed into this machine via a star wheel and mechanical pushers. Drums were rotated at approximately 30 rpm and cleaned with very fine steel grit to remove all foreign substances without damaging them. Thereafter the drums were painted and baked prior to storage or loading for off-site distribution.



2.5.2 Open Head Drum Reconditioning

Open head drums were transferred from the incoming drum storage areas to a staging area located immediately south of the furnace building, Building No. 2. The drums were staged according to specific sizes and types in preparation for cleaning. Drums were placed on a conveyor which extended 200 feet from the yard area to Building 2 and directed drums to the furnace.

Drum Preparation

The drums were transferred to Building 2 where bolts, locking rings etc. were removed prior to being placed in an inverted position on a second conveyor going to the drum burning furnace. This second conveyor extended through the furnace into Building 3. Drum covers were generally placed on the top of drums. Drum rings were stacked on the conveyor.

Drum Burning

The drums, covers, and rings were conveyed through the furnace which was made up of three separate zones. The first two zones were controlled to maintain a temperature between 1,000°F and 1,200°F. The third and final zone of the furnace was maintained at a higher temperature to serve as an afterburner.

Furnace Unloading Area

Drums exiting the furnace were washed and cooled with a water rinse prior to entering Building 3. Water and ash generated during this process was collected in two (2) subsurface tanks of an unknown size and recirculated in a concrete trough running parallel to and west of the furnace. The trough measures approximately 95' long by 2.5' wide and is reported to be between 2.5 and 5 feet deep. Rinse waters no longer amenable for use in cooling were reportedly discharged via underground pipes to the water separator area. The drums, covers and rings were then fed to separate departments for processing.



Shot Blasting Machine

Covers were shot blasted in a separate machine in an adjacent room. Cooled, cleaned drums were transferred to the rear of Building No.1 where they were shot blasted in preparation for de-denting and painting. The drums were placed into a specially designed machine which shot blasted the interior and exterior of the drums. After drums were clean, they were conveyed approximately one hundred and fifty feet to the open head drum de-denting department.

De-Denting and Re-Rolling Department

Drums conveyed to this department were de-dented and chime sealed in a similar fashion to that described for closed head drums.

Inspection and Painting

Upon completion of the reconditioning processes, the drums were inspected and painted according to customer specifications and were placed onto trailers for shipment off-site.

2.6 WASTE MANAGEMENT

Wastes generated during the operation of the Bayonne Barrel and Drum Company included ash from the drum cleaning furnace, sludges from the settling tanks and wastewater. Ash and sludge were disposed of off-site as RCRA hazardous (EP Toxic) and non-hazardous solid wastes. Wastewater was treated at the facility to remove sediments and oil in the wastewater treatment area. Treated water was discharged under permit to the Passaic Valley Sewer Authority.



3.0 SITE LAND USE HISTORY

The Bayonne Barrel & Drum Co. (BB&D) site consists of an 8.966 acre parcel of land described as lots 3, 5, and 16 in Block 5002, Newark, Essex County, New Jersey and a 5.539 acre parcel of property described as lot 14 in Block 5002, Newark Essex County, New Jersey owned Mr. Frank Langella. Mr. Langella leased this property to BB&D for use in connection with its recycling operation. The meets and bounds of these two properties are provided on Dwg. Sheet BB-001 (Site Plan) and BB-002 (Existing Site Conditions). These two properties are collectively referred to as 150 and 154 Raymond Boulevard Newark, New Jersey, which is the subject of this RCRA Closure Plan.

The properties now owned by Bayonne Barrel and Drum and Frank Langella have been subject to numerous sources of environmental contamination prior to their acquisition of the land. This section presents the history of the acquisition of the property and, to the extent known, the history of the uses of the property prior to BB&D's operation.

3.1 HISTORY OF ACQUISITION

3.1.1 Initial Acquistion

In approximately 1940, Bayonne Steel Drum merged with Export Barrel Co., which owned three acres of property which now comprises the northern end of the existing BBD property. At the time that Bayonne Steel Drum merged with Export Barrel Co., the name was changed to Bayonne Barrel & Drum Co. It is believed that this portion of the property was filled at some time prior to 1931 to facilitate construction of the two "original" buildings (Building No.s 3,6 & 7). The original date of construction of these buildings is unknown and the original use of the buildings is not fully know. One of the original uses of the "original" buildings is reported to have been a leather tannery. According to Mr. Langella, hides were hanging on the walls of the original buildings when he first occupied them.

BB&D operated it's reconditioning operations on this property throughout the forties. As shown on a 1949 aerial photograph of the property, BB&D's operations were limited to the south by wetlands then owned by the Episcopal Diocese of the City of Newark. The northern and western property boundaries were bordered by an exit ramp connecting Rts. 1 and 9 to Raymond Boulevard. The eastern boundary extended approximately 250' east of the current property line.



3.2 HISTORICAL USE

Prior to BB&D's acquisition and use of lots 3, 5, and 16 in Block 5002, and its use of lot 14 in Block 5006, the property was subjected to numerous other sources of environmental contamination which are believed to persist at the property today and have a significant impact on BB&D's ability to identify and mitigate environmental contamination associated with it's own waste management activities. For this reason, BB&D has investigated the past use(s) of the property to identify, to the extent possible, the environmental contaminants which existed at the property prior to its acquisition by BB&D (see Dwg. Sheet No. BB-003).

3.2.1 Background Investigation

Substantial background information has been identified concerning the use and environmental condition of the BB&D properties and adjacent properties. This information includes the following reports:

Preliminary Site Investigations
New Jersey Turnpike
1985 - 1990 Widening from Passaic River to Milepost 103
Historical Survey of Possible Sources of Contamination
within and adjacent to the Proposed Turnpike
Right-of-Way.

Submitted to: New Jersey Turnpike Authority P.O. Box 1121

New Brunswick, New Jersey

Submitted by: Louis Berger & Associates East Orange, New Jersey

December, 1986

Results of Preliminary Investigations and Sampling in Proposed New Jersey Turnpike Right-of-Way at the Bayonne Barrel and Drum Property, Newark, New Jersey.

Submitted to: New Jersey Turnpike Authority

P.O. Box 1121

New Brunswick, New Jersey

Submitted by: Louis Berger & Associates

100 Halstead Street



East Orange, New Jersey

December, 1986

Results of Preliminary Investigations and Sampling in Proposed New Jersey Turnpike Right-of-Way at the Former Newark Drive-In Property, Newark, New Jersey.

Submitted to: New Jersey Turnpike Authority

P.O. Box 1121

New Brunswick, New Jersey

Submitted by: Louis Berger & Associates

100 Halstead Street East Orange, New Jersey

September, 1986

Soils and Groundwater Characterization Bayonne Barrel and Drum Company, Newark, New Jersey.

Submitted to: Schneider & Weiner, P. A.

Attorneys at Law 1180 Raymond Boulevard New Brunswick, New Jersey

Submitted by: Dan Raviv Associates, Inc.

5 Central Avenue

West Orange, New Jersey

April 18, 1986

Updated: July, 1986

Summary Report of the Test Pit and Monitoring Well Investigation at the Newark Drive-In Site, Newark, New Jersey

Submitted to: National Amusements, Inc.

200 Elm Street

Dedham, Massachusetts 02116

Submitted by: Wehran Engineering Corp.

666 East Main Street

Middletown, New York 10940

October, 1988



Preliminary Site Assessment Bayonne Barrel and Drum Company, Newark, New Jersey

Submitted to: Dave Rogers

Response & Prevention Branch Office of Emergency and Remedial

Response

U.S. E.P.A. , Region II Edison, New Jersey 08837

Submitted by: Christopher S. E. Marlowe

Region II, Technical Assistance Team

Weston/SPER Division Edison, New Jersey 08837

August, 1989

RCRA Enforcement Inspection
Bayonne Barrel and Drum Company
Newark, New Jersey
NJD009871401
June 2, 1988

Submitted by: Response & Prevention Branch

Office of Emergency and Remedial

Response

U.S. E.P.A. , Region II Edison, New Jersey 08837

August 19, 1988

Copies of each of these reports are provided as Appendices to this Closure Plan. Based on a review of these background reports and NJDEP and USEPA files concerning the BB&D and other adjacent properties, the following historic environmental conditions have been identified at the BB&D site.



3.2.2 "15E Sanitary Landfill"

As early as 1934, aerial photographs reveal a landfill operation on the southern end of what is now the BB&D site. The landfill is known as the "15E Sanitary Landfill". According to the Louis Berger & Associates, Inc. report entitled Preliminary Site Investigations; New Jersey Turnpike 1985-90 Widening from Passaic River to Milepost 105 (Preliminary Site Investigation), the landfill originally commenced operation at Foundry Street on Lot 11, Block 5002 and progressed onto the Bayonne Barrel & Drum site, and east towards Doremus Avenue. The progression of the landfilling operation continued throughout the 1940s. By 1947 the landfill occupied all of the property currently owned by Frank Langella (lot 14, Block 5002) and a substantial portion of the property now owned by the BB&D. progression of the growth of the landfill is shown in Figures 3-1, 3-2 and 3-3.

A 1949 aerial photograph of the area shows the "15E Sanitary Landfill" to encompass approximately 45 acres. All of lot 14, Block 5002, owned by Frank Langella and the majority of the southern half of BB&D's property is comprised of uncovered waste materials.

In the early 1950s, landfilling activities ceased. Jersey Turnpike Authority (NJTA) constructed the turnpike and the 15E interchange on the landfill. The Newark Drive-In was constructed on lots 11 and 12 in Block 5002 over approximately 19.2 acres of the "15E sanitary landfill". Bayonne Barrel & Drum and Frank Langella acquired and developed approximately 8.06 acres of the "15E Sanitary Landfill" as described in Section 3.1, during the As a result of these activities, the original 1950s. footprint of the "15E Sanitary Landfill" was covered by new construction. The site was not registered with the NJDEP until it was discovered during the Preliminary Site Investigation performed by Louis Berger & Associates, Inc. in 1986.

The discovery and delineation of the "15E Sanitary Landfill" by Louis Berger & Associates, Inc., coupled with the U.S. EPA's enforcement action against BB&D and attempts by National Amusements, Inc. to redevelop a portion of the old Newark Drive-In, has caused several independent studies to be undertaken at portions of the landfill. The reports are listed in Section 3.2.1 and are provided in Appendices B



through F. Each of the studies concludes that the "15E Sanitary Landfill" is contaminated with a wide variety of organic and inorganic contaminants. As a result, the landfill has been classified as a Major Industrial Discharge by the New Jersey Department of Environmental Protection, Division of Water Resources (NJDEP). The NJDEP has issued a Discharge to Groundwater (Permit #NJ006408) to the current owners of the properties which comprise the 15E Sanitary Landfill. The property owners, which NJDEP has identified as co-permittee's are; Bayonne Barrel & Drum Company, Edle Realty, The Joman Realty Company, Mr. Frank Langella, and the New Jersey Turnpike Authority.

An analysis of the information available from the studies of the old Newark Drive-In and the BB&D site indicates that the contaminants and their concentrations in the soils at both sites are similar. This demonstrates that much of the contamination identified in the soils at the BB&D site is the result of the prior use of the property as a landfill. A comparative analysis of the environmental contaminants is provided in Table 3-1.

Dan Raviv Associates, Inc., Louis Berger & Associates, Inc., and Wehran Engineering Corp. have drawn conclusions about the nature and source of many of the contaminants in their respective reports which confirm that much of the contamination identified at the BB&D site was caused by the landfilling of waste materials and the application of insecticides.

3.2.3 Bottom Ash

When BB&D expanded its operations in the early 1950s, it contracted with McCaffery Contracting Co. of Newark to fill the property it acquired from the Episcopal Diocese of the City of Newark with bottom ash from the Public Service Electric & Gas generating station. Subsequently, the entire southern portion of the property was filled with bottom ash to provide a stable base for its operations. The approximate limits of the ash are shown on Dwg. Sheet BB-002.

Bottom ash from the combustion of coal is know to contain high levels of heavy metals.



TABLE 3.1

			Clean-Up Levels
Compound	BBD	Newark-Drive-In	Used By BEECRA
PHC	173,000.0 Mg/Kg	2,970.0 Mg/Kg	100 Mg/Kg
PAH	110.0	30,000.0*	10 Mg/Kg
voc's	851.0	413.0	1 Mg/Kg
PCB	320.0	41.0	1-5 Mg/Kg
BN	861.5	478.1	10 Mg/Kg
Metals:			
Lead	8,520.0	15,400.0	100 Mg/Kg
Zinc	6,120.0	2,180.0	350
Copper	1,580.0	788.0	170
Calcium	71.0	10.7	3.0
Arsenic	73.0	198.0	20
Chromium	790.0	131.0	100
Iron	, 	89,600.0	Individually Determined
Pesticides:			
4,4' DDD	ND	68.0	Individually Determined
4,4' DDT		9.2	Individually Determined
4,4' DDE .	.140	3.5	Individually Determined
Endosulfan Sulfate		.250	Individually Determined
Endrin Aldehyde	.065		Individually Determined
			그 그 그 이 없는 것 같아. 이 집에 가는 것이 하면 하는 것이 없는 것 같아. 그리는 것이 없는 것 같아.

*Over 3% of sample

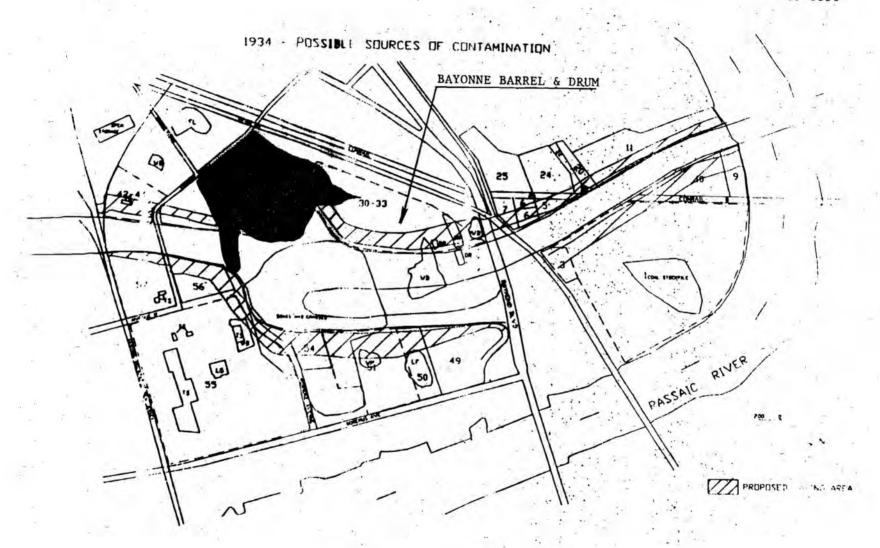


Figure 3-1

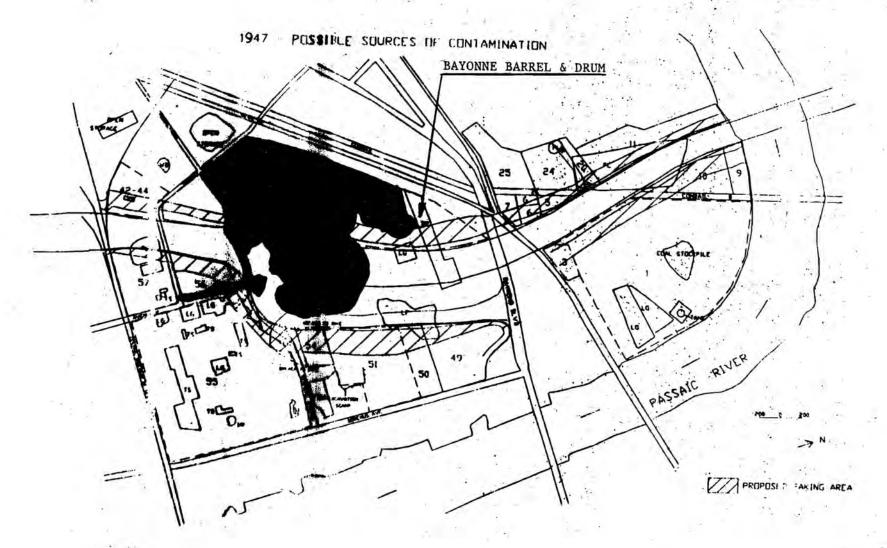


Figure 3-2

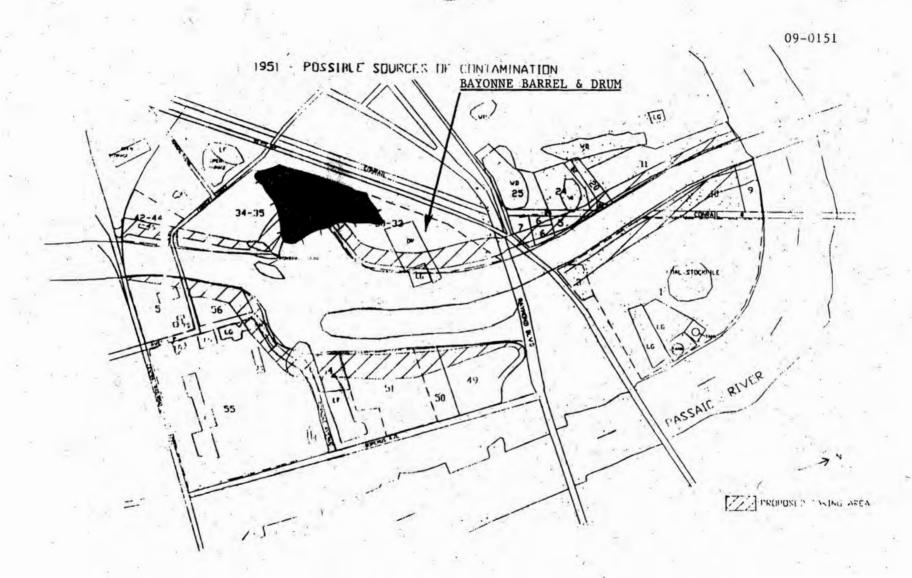


Figure 3-3

4.0 REGULATORY ISSUES

In addition to being required to comply with the RCRA Closure requirements established by the U.S. EPA, Bayonne Barrel and Drum Company and Frank Langella are also subject to other New Jersey State environmental regulations by virtue of the original uses of the property by others. The purpose of this section is to present an overview of the entire environmental regulatory scheme to which the Bayonne Barrel and Drum property is currently subject and, to present the company's approach to satisfying all applicable State and Federal regulations in an orderly and responsible manner.

4.1 RCRA CLOSURE

Bayonne Barrel and Drum is subject to regulation under RCRA for Closure of "regulated units" associated with its management of hazardous waste. Through the implementation of this Closure Plan, Bayonne Barrel and Drum intends to remove the RCRA hazardous waste associated with its operations, to remove surficial PCB's greater than 50 ppm to decontaminate the solid waste management units associated with the generation and storage of hazardous waste and to remove contaminated soil associated with the operation of those units. Specifically, Bayonne Barrel and Drum will address the following units under this plan:

- 1) The Furnace Area and Surrounding Soil Contamination
- The Wastewater Treatment Facility and Surrounding Soil Contamination
- 3) The Ash Pile and Surrounding Soils
- 4) The Interiors of Buildings 1,2, & 3

Each of these units have been identified by the U.S. EPA and the NJDEP as RCRA regulated units (see Dwg. Sheet No. BB-004). The U.S. EPA has also identified other areas of environmental concern, including the incoming drum storage area, which it believes should be addressed under this closure plan. Normally, the definition of "regulated units" is broadly interpreted by the implementing agency (U.S. EPA or an Authorized State) to include areas or sources of suspected contamination at a site to ensure that the environment is properly protected. Such areas might include nonhazardous waste management units (RCRA Subtitle D units) and/or soil or ground water contamination identified on site. In the case of Bayonne Barrel and Drum, other New Jersey environmental rules and regulations apply to several areas of the site which must also be addressed in order to properly close the site. These environmental rules and regulations and their applicability to Bayonne Barrel and Drum are discussed below.



4.2.2 N.J. Environmental Cleanup Responsibility Act

Bayonne Barrel and Drum, by virtue of its Standard Industrial Classification (SIC) Number and its management of hazardous materials and waste is subject to the N.J. Environmental Cleanup Responsibility Act Regulations (ECRA) at such time as the facility triggers ECRA. The ECRA review will encompass all areas of the property not subject to regulation under the N.J. Solid Waste Management Act (NJSA 13:1E-1 et seq.). (The N.J. Solid Waste Management Act has been found to be equivalent to RCRA Subtitle C. Accordingly, ECRA will apply to all areas not subject to closure under this Closure Plan or the Landfill Closure regulations.)

Specifically, the ECRA regulations will apply to the surface of the incoming drum storage area consistent with the New Jersey Attorney Generals opinion in the matter of Vulcan Materials, ECRA Case #84379. In addition, the closure of the remaining buildings (i.e. all buildings not decontaminated under this Closure Plan) will also be subject to ECRA review and decontamination as necessary.

4.2.3 NJPDES Regulation

As described in Section 4.2.1 the NJDEP has issued groundwater monitoring permits to all of the owners of the properties occupied by the "15 E Sanitary Landfill" including Bayonne Barrel and Drum and Frank Langella. The landfill has been categorized by the NJDEP as a Major Industrial Discharge. This monitoring program has been developed by the NJDEP to assess the impact of the entire "15 E Sanitary Landfill", including the Bayonne Barrel and Drum Site. Because of the heterogeneous nature of landfills in general, and the demonstrated heterogeneity of the "15 E Sanitary Landfill" from studies by Wehran Engineering, Berger and Associates and Raviv, it is believed that independent ground water monitoring of the RCRA regulated units will be inconclusive as to the source of the contaminants. Accordingly, Bayonne Barrel and Drum believes that the existing NJPDES DGW Permit should be adhered to in lieu of additional groundwater monitoring at each RCRA regulated unit.

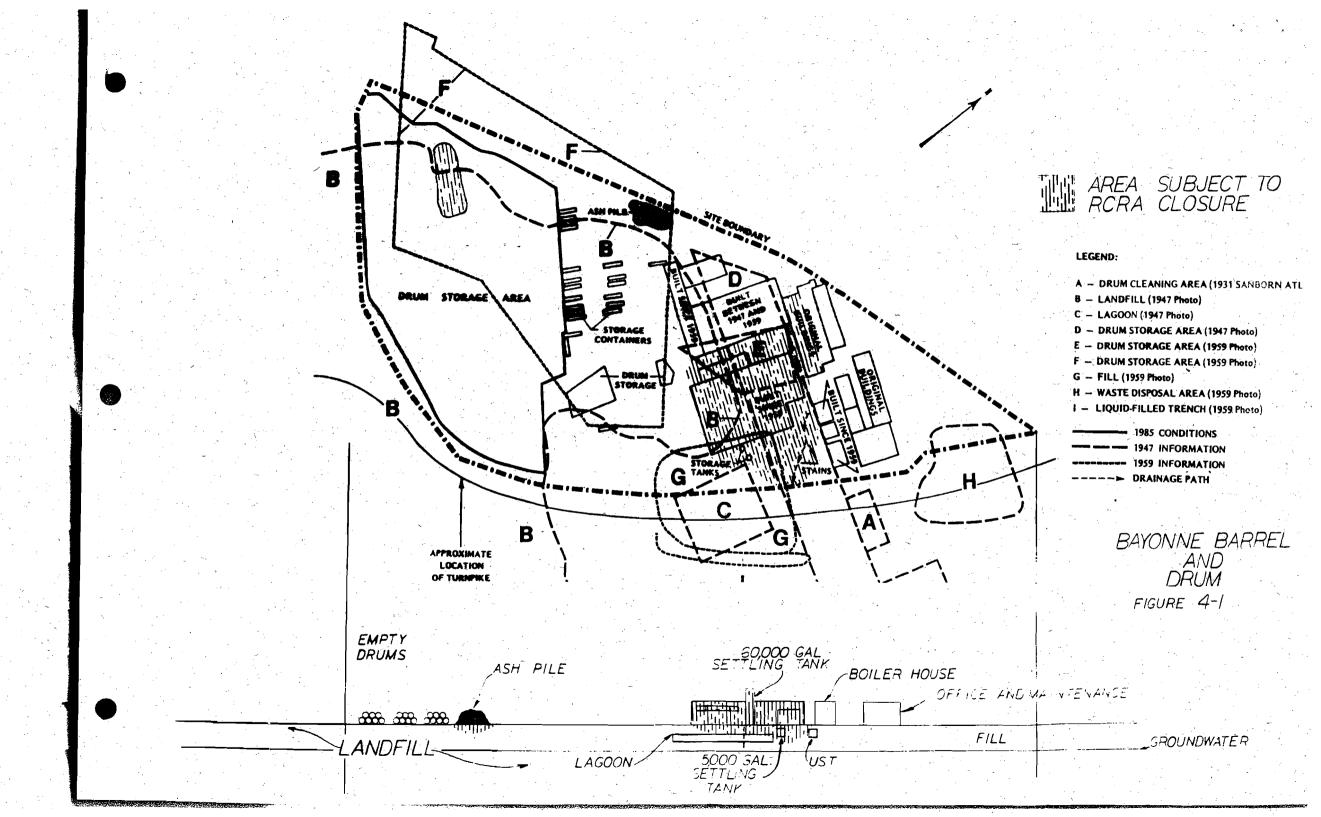


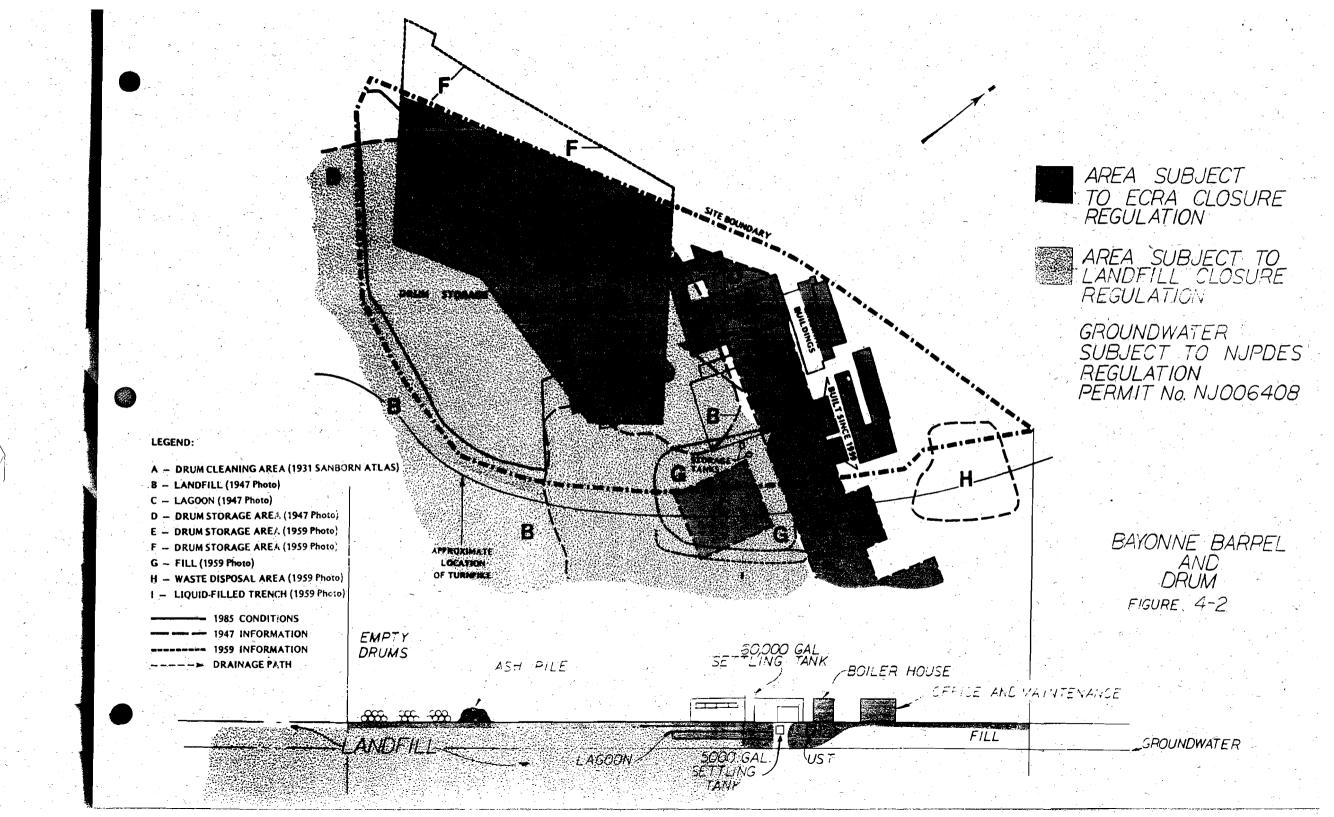
4.3 COMPREHENSIVE APPROACH TO STATE AND FEDERAL REGULATIONS

Bayonne Barrel and Drum's comprehensive approach to satisfying all state and Federal environmental regulations as described above is depicted graphically in figure 4-1 and 4-2. The key elements of the approach are as follows:

- o Close all hazardous waste management units described in section 4.1 in accordance with this plan.
- o Address the sanitary landfill underlying the facility in accordance with the requirements of the sanitary landfill closure regulations.
- o Decontaminate the remaining structures and address miscellaneous spills on the property under the ECRA regulations.
- o Perform groundwater monitoring in accordance with NJPDES DGW Permit #NJ006408.







5.0 DESCRIPTION OF SOLID WASTE MANAGEMENT UNITS

Introduction

The following Solid Waste Management Units have been identified at the site:

- * Furnace Area,
- * Ash Pile and Ash Pile Area,
- * Building 1,2 & 3 Interiors,
- * Water Treatment Area.

Information concerning these SWMU's and sampling results and interpretation from prior site investigations are summarized below. Results of past sampling are also shown on Dwg No.'s BB-005A and BB-005B.

5.1. ASH PILE AND SURROUNDING SOIL

5.1.1 Description

The furnace ash pile is located in the south eastern portion of the facility and occupies an area 50 feet x 120 feet. It is approximately 4 feet in height and has a volume of approximately 890 cubic yards (see DWG. Sheet No. BB-003). Results of samples collected from ash and analyzed in 1978, 1979 & 1980 for disposal purposes indicate that the material was a RCRA characteristically hazardous waste for the presence of chromium and lead.

A 1981 New Jersey Department of Environmental Protection (NJDEP) inspection report estimated that approximately 40,000 lbs of incinerator ash and sludge were generated a month.

An NJDEP site inspection report dated 3/3/82 indicates the presence of a pile of ash within this area measuring 2'x 35'x 40' or approximately 103 cubic yards (cy). The report notes that leachate was running from the ash pile. The leachate was described as encompassing an irregular area extending approximately 150 feet downgradient from the pile. Samples collected from the waste pile (sludge) and the run-off material indicated that neither of these materials were characteristically hazardous for metals, although the sludge was found to be ignitable (sample # TD074). Halogenated organics compounds were detected in the sludge and the leachate (3,450 and 2,579 ppm, respectively).



It is currently unknown whether the sludge sampled by the NJDEP in 1982 is represented within the current ash pile. Therefore, additional sampling will be required for proper classification.

5.1.2 Nature of Contaminants

5.1.2.a Ash Pile

Analysis for PCB's was conducted on samples collected by Raviv in January 1985 from the ash material (BBD1 through BBD9). One composite sample (BBD10) was analyzed for EP Toxic metals. Composite sample BBD10 was not found to be EP Toxic during the Raviv sampling. PCB's were detected in concentrations up to 17 ppm in three locations (BBD1, BBD5 and BBD9). Additional analytical parameters including volatile and semi-volatile organics, total metals, etc. reported in the Raviv report (1986), were collected in October 1985 from soil adjacent to the ash pile (BBD4 through BBD7 and BBDC4).

The ash pile was also sampled by the U.S. EPA during February 1984. Three composite samples were collected during this sampling event (sample #s 65184, 65185 & 65186) and were analyzed for EP Toxic metals, pesticides and herbicides, semi-volatile and volatile priority pollutants and total metals. Results of two of the samples indicate that the ash is EP Toxic for lead and cadmium. Purgeable semi-volatile and volatile organics were detected in the material also. U.S. EPA samples of ash were not analyzed for PCB's.

Based upon these sample results, ash would not be regulated by the Toxic Substance Control Act since PCB concentrations are below 50 ppm. Therefore, PCB's detected in adjacent soil could not have been derived from the ash pile run-off. Furthermore, unless subsequent sampling, performed as indicated in section 6.1.1.a of this plan, indicates that PCB's are present in the ash in concentrations greater than 50 ppm, ash will not be considered a TSCA regulated material, as defined in 40 CFR 761.

5.1.2.b Surrounding Soil

Results of soil sampling conducted by Raviv in 1986 surrounding the ash pile generally indicate increasing PHC contamination with increasing depths suggesting a source of contamination other than the ash pile. This trend deviates



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buildings are currently stored within the one story building. These materials will be sampled as described in section 6.1.4 of this plan and disposed of in accordance with current regulations.

In addition to the ash material in this area, solidified paints and/or other resinous materials are present. These materials predominate the surface area in the location of the feed end of the furnace. Although these solidified materials may not be characteristically hazardous, their presence suggests that organic contaminants may be present within this area.

Past results of samples collected by Raviv in 1985 indicate that a wide array of organic and inorganic contamination has occurred in the furnace area. Only three (3) locations (BBD17 through BBD19) within this area have been sampled to date and therefore additional sampling will have to be undertaken prior to the excavation and disposal of contaminants. No sampling was conducted within this area by Berger during the NJ Turnpike proposed ROW sampling as this area was beyond the proposed ROW.

Results of Raviv sample BBD18, reportedly collected from a depth of one (1) foot adjacent to the feed end of the furnace, indicate that contamination has occurred in this area. Petroleum hydrocarbons were found at concentrations of 16,300 ppm and PCBs were found at 320 ppm.

Results from sample BBD17, reportedly collected adjacent to the west underground storage tank at the output end of the furnace also indicates that contamination has occurred in this area. Samples were collected from three intervals; surface, zero to one (0-1') foot and five to seven (5-7') feet. The surface sample was analyzed for PHC's, PCB's and volatile organics (VOC). Based upon current site conditions, this sample presumably represents ash and solidified organic material in this area. Results indicated PHC's at 16,000 ppm, PCB's at a concentration of 28 ppm and VOC's at 22 ppm. Results of the first one foot sample increment indicates contamination from PHCs (9,210 ppm), base neutral extractables (51 ppm), phenol (20 ppm) and volatile organics (11.5 ppm). This sample was also subject to analysis for dioxin. Results were non-detected at a detection level of 0.32 ppb.

Results from the five to seven (5-7') foot sample increment, assumed to be groundwater elevation, indicate PHC



contamination of 20,800 ppm.

Results from sample BBD19, reportedly collected from the alley northeast of the furnace outlet between the closed head reconditioning building and the building north of the furnace (Building No.3), indicate substantially less contamination than that reported for the other samples collected within the furnace area. Samples were collected from three (3) intervals; zero to one (0-1'), one to two (1-2') feet and two to three (2-3') feet below the surface. Petroleum hydrocarbons and PCB's were detected in the first two sample increments at levels of 4,330 ppm PHC and 37 ppm PCB, and 1,700 ppm PHC and 32 ppm PCB respectively. Results of the sample collected at the third and final increment (2-3') indicate PHC contamination at a concentration of 130 ppm. No PCB's were detected at this sample increment. first sample increment (0-1') was also analyzed for volatile organics which was reported to be non-detected.

Results of a surface soil sample (65192) collected by the U.S. EPA during their investigation in February 1984 and analyzed for EP Toxic metal and pesticides/herbicides, semi-volatile and volatile organics, and total priority pollutant metals indicates the presence of total metals and semi-volatile organics above NJDEP recommended guidance values. Volatile organics appear to have been non-detected. Additionally, the soil was not found to be leachable for metals based upon results of analysis for EP Toxicity.

5.3 WASTE WATER SEPARATOR AREA

5.3.1 Introduction

The water separator area is located east of and adjacent to building No.1, the closed head drum reconditioning building. Waste waters and oil generated during the cleaning and reconditioning of closed head and open head drums were discharged to this area for treatment. Liquid wastes from the cleaning of closed head drums were directed from building No.1 to the separator trench. Oil and water collected in the trough and tanks located in the furnace area were also directed to the trench. Primary treatment in this area included the physical separation of organics, water and solids. Waste water was separated initially in the trench and 5,000 gallon underground settling tank. Thereafter the water was pumped to the above ground 60,000 gallon storage tank for final separation. The remaining two storage tanks were never used due to the cessation of operations. Effluent water was discharged to the Passaic



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Valley Sewer Authority under permit after treatment.

5.3.2 Nature of Contaminants

Past sampling activities in the waste water treatment area have included the collection of samples by the NJDEP (1982), the U.S. EPA (1984), Raviv (1985) and Berger (1985). Samples collected by the NJDEP and U.S. EPA were predominantly representative of waste materials, although some environmental soil samples were analyzed by the NJDEP. Samples collected by Raviv and Berger were predominantly representative of the environment.

Samples were collected from the waste water treatment system by the NJDEP in January and March 1982 while the site was operating. Results from aqueous material in the 5,000 gallon underground tank (sample No. TD064) indicate that waste waters had concentrations of chromium.

Results of sampling by Raviv indicate substantial contamination in the waste water treatment area from the surface elevation to approximately groundwater elevation (5-7 feet). Surface contaminants identified by Raviv included PHC's in concentrations ranging from 5,920 ppm to 23,700 ppm (BBDS1 & BBDC3) and PCB's at 130 ppm (BBDS1).

Sample BBD16, collected from the 1 to 2 foot interval, was the only discrete sample collected from this interval in the water separator area. This sample indicated elevated levels of PHC's and PCB's (20,800 ppm and 213 ppm respectively). Priority Pollutant Volatile Organics (VOC's) were detected at 1.8 ppm in this sample location as well. A composite sample collected from 5 to 10 feet below the surface in this location had dramatically lower levels of these constituents indicating a reduction in the vertical migration of contaminants, presumably from the interception of these materials by groundwater.

Soil samples collected at the 5 to 7 foot interval from location BBDC3 (finished as a monitor well) had elevated levels of PHC's and PCB's (59,000 ppm and 141 ppm respectively). Priority Pollutant's VOC's were also detected at 6.3 ppm. Based upon these results, it appears that petroleum related contamination may have originated from a below ground source or be related to prior land use practices.

Reports for the Berger samples (M1188 and M1189) located



within the area were similar in the physical description of general petroleum contamination. However, the Berger samples collected from 0 to 1.5 feet indicated substantially lower levels of VoC's (0.22 ppm and 0.002 ppm respectively). Likewise, the Berger Results from this interval were non-detected for PCB's with a detection level of 15 ppm. Although these results are from different specific locations, they are relatively close and therefore suggest that contamination is either not far reaching or may be from non-specific contamination in the fill material. Results of Berger sample No. M1198, collected from 0 to 1.5 feet below the surface and topographically downgradient of the separator area, indicate substantially lower levels of contamination than those collected adjacent to the separator.



5.4 BUILDING INTERIORS

5.4.1 Introduction

Based upon current knowledge and understanding of the site operations, hazardous wastes were not stored in the buildings during the operating period of the facility and may not have been generated in all of them. Characteristically hazardous ash has been identified as being generated in the furnace area and PCB's in excess of 50 ppm have been identified within surface soil in this area. Therefore adjacent buildings (No.s 1,2 & 3) could have been contaminated with leachable metals and/or PCB's through site traffic. Results of sampling conducted by the U.S.EPA in 1988 indicates that contaminants exist within areas of Building No.3 and the waste in Building No.2.

5.4.2 Nature of Contaminants

Building interiors are currently in a broom swept condition with the exception of Building No.2. The only visible areas of the buildup of debris is located in the floor troughs in building No.1. The interior troughs of building No.1 will be sampled since it is not known if waste waters and sediments generated during the cleaning of drums would be considered characteristically hazardous. Prior sampling results reported by Raviv indicate the presence of base neutral extractables and low level pesticides within these troughs.

As previously described, RCRA hazardous wastes resulting from the cleanup of building interiors are currently stored in a waste pile in Building No.2, the furnace area building, making the closure of that building interior subject to the closure of waste pile(s). In addition, drums containing ash, debris and waste oil/sludge from the clean-out of the waste water facilities are stored in Building No.2, making this building also subject to the closure of containers.

Results of samples collected from soil in the interior of Building No.3 by the U.S.EPA in 1988 indicate that ash/soil containing high levels of metals is present within this area.



5.5 DEMONSTRATION OF COMPLIANCE

This closure plan has been prepared in accordance with 40 CFR 265 et seq. for the areas applicable to the closure requirements. Specific information, as described in the interim status (265) Closure/Post-Closure Plan Checklist.

- A-1 Closure Plan Requirements
- A-la Closure Performance Standard see Section 6.0.1
- A-1b Partial Closure Activities Not Applicable
- A-1c Maximum Waste Approximately 1,630 cubic yards of ash is currently stored in a pile located in the southwest portion of the site. Approximately 65 cubic yards of ash and debris from the cleanup of the buildings is stored in a pile in building No.2. An estimated 350 drums of solid waste, consisting of floor sweepings, debris and ash are also stored within building No.2. Although a specific inventory of drum contents has not been conducted, a portion of these drums are reported to contain waste oil/sludge generated during the cleaning of the waste water treatment tanks. An estimated 400 cy of ash is estimated to be on the surface of the furnace area. Based on information contained in U.S.EPA and NJDEP inspection reports, approximately 40,000 pounds (lbs) of ash was generated monthly during the active operations of this facility.
- A-1d Inventory Removal, Disposal or Decontamination of Equipment
 - All equipment previously used in the operations of this facility which were housed within the buildings have been removed. Specifications for the removal and disposal of current waste inventory are provided in Sections 6 and 7 of this closure plan.
- A-ld(1) Closure of Containers The container storage area subject to this plan is located in building No.2. Specific information concerning the closure of this area is provided in Section 6.1.4 of this plan, re. Phase I Remediation.
- A-ld(2) Closure of Tanks The closure of tanks involves two
 (2) underground collection tanks located in the furnace area and their associated separation trenches and piping, and one (1) 5,000 gallon underground tank and

Diversified Environmental Resources, Inc.

- one (1) 60,000 gallon above ground settling tank and their associated separator trench and piping. Removal of wastes from these tanks is described in Section 6.1 of this plan. Tank removal and the removal of soil contamination are discussed in Section 6.3 of this plan.
- A-1d(3) Closure of Waste Piles Closure of the waste pile(s) includes the closure of the ash pile located in the southwest corner of the site and the waste pile located in Building No.2. Closure will be conducted in accordance with federal regulation since waste piles are not allowed in the state of New Jersey. Waste piles subject to this closure plan consist of ash stored in the southeast portion of the site and ash and debris stored on the floor of building No.2 (Sections 6.1.1 and 6.1.4 respectively). Remediation of areas subject to potential leachate run-on are discussed in Sections 6.1.2 and 6.1.4.c.
- A-ld(4) through A-le(8) Not Applicable
- A-1f Schedule for Closure A Schedule for Closure is provided in Appendix J of this plan.
- A-1g Extensions for closure time Not applicable at this time.
- A-1h <u>Certification for Closure</u> A Certification for Closure will be provided upon project completion.
- A-2 <u>Post-Closure Plan Requirements</u> A post-closure plan is not required at this site per the U.S.EPA Consent Agreement with Bayonne Barrel and Drum, September 3, 1984 (Section 11.B.).
- A-3 <u>Closure Cost Estimate</u> A Closure Cost Estimate is provided in Appendix I.



6.0 REMEDIAL ACTION PLAN

Introduction

This Closure and Remedial Action Plan has been designed to control, minimize or eliminate the escape of environmental contaminants and hazardous substances identified at the site, which are related to the generation and storage of hazardous wastes from the drum reconditioning operations, and minimize the need for future maintenance in accordance with 40 CFR 265.111. This plan addresses Solid Waste Management Units (SWMU's) used to store RCRA hazardous wastes in excess of 90 days.

Based upon the lack of conclusive documentation concerning the extent of horizontal and vertical contamination, the estimated physical extent of remediation required at this site, and the interfering land use practices employed at this site prior to the complete development of the drum reconditioning facility, this remedial action plan will be conducted in three distinct and separate phases. The plan identifies the steps and provides a description of how each hazardous waste management unit at the facility unit will be closed in accordance with 40 CFR 265.112(b)1. SWMUs to be closed include:

- A-1d(1) <u>Closure of Containers</u> Containers stored in Building No.2;
- A-1d(2) Closure of Tanks Closure of two (2) settling tanks, associated trench and piping located in the Furnace Area, and closure of one (1) trench, one (1) 5,000 gallon underground settling tank, one (1) 60,000 gallon above ground settling tank and associated piping located in the waste water treatment area;
- A-1d(3) Closure of Waste Piles Closure of waste piles including approximately 890 cubic yards of ash currently stored in the southeastern portion of the site and approximately 65 cubic yards of ash and debris currently stored in building No.2.

Additional areas not identified as a solid waste management units, but which are subject to this closure as described in Sections 4 & 5 of this plan, include the interiors of Building No.s' 1 & 3, and the excavation of soils.



identified at concentrations up to 413 ppm.



6.01.b Closure Performance Standard

Preliminary investigations undertaken at adjacent, off-site locations in the reported confines of the 15E Sanitary Landfill indicate substantial contamination from it's operation. Based upon these results and other land-uses reported for the site, performance standards for this closure can not meet current NJDEP recommended action levels. Rather, closure standards are designed to take into consideration the background conditions, i.e., the "15E Sanitary Landfill" (see Table 3-1).

Although specific analytical results are available for areas of the landfill not within the boundary of the BB&D site, landfilled material from the operation of the 15E landfill can not be considered homogeneous and direct extrapolations of background quality can not be made. Specific regulatory cleanup standards other than those proposed herein may be applicable during site remediation under other regulatory programs as described in Setion 4.0 of this Plan.



6.1 PHASE I

Phase I of this remedial action plan will focus on the sampling, removal and disposal of hazardous wastes currently on the site. This phase will also include the sampling of other solid wastes currently on the site in preparation for disposal.

Sediments and solid waste within the furnace area tanks, trough and on the soil will be sampled for disposal purposes. In addition, floor sweepings and materials generated during the past cleanup of adjacent buildings, currently stored in Building No.2, will be sampled. Oil, water and sediments generated during the clean-out of the waste water treatment tanks during previous work conducted by others will also be sampled for disposal purposes.

Since it is currently not known whether processes involved with the cleaning of closed head drums in Building No.1 generated hazardous wastes, sediments remaining in the building's waste collection troughs and sediments within tanks and separator trenches in the water separator will be sampled for RCRA characteristics.

Soil/ash not covered by concrete in Building No.3 will also be sampled for RCRA characteristics during this phase.

6.1.1 Ash Pile

Prior to disposal, ash will be sampled in accordance with those methods stipulated in section 8.0 of this plan. Based upon the information currently available, ash piled in the western corner of the site is EP Toxic for lead and cadmium and therefore will be disposed of as a characteristically Although the ash has been found to hazardous RCRA waste. contain PCB's at concentrations less than 50 ppm, soils underlying the ash have been shown to contain total PCB's in excess of 50 ppm (Aroclor 1248 at 67 ppm and Aroclor 1254 at 117 ppm, U.S. EPA 1984 sample No. 6517). Since ash overlies soil with higher concentrations of PCB's, it is apparent that PCB contamination to soil could not have resulted from the ash. Therefore, ash will not be handled in accordance with TSCA Compliance Program Policy No. 6-PCB-3 and disposed of as TSCA hazardous unless subsequent sampling for PCB's undertaken during this sampling event show concentrations within the ash to be in excess of 50 ppm.



Volatile organics have been detected in the ash pile at concentrations up to 418 ppm, and the potential exists that halogenated organic compounds (HOC's) exist at concentrations sufficient to make the ash a California List Land Ban material (40 CFR 268.32(e)2). In addition, semi-volatile organics have been detected in the ash at significant concentrations. Therefore, sampling directed at evaluating the total concentrations of HOC's as described below will be undertaken prior to off-site disposal. Upon completion of the sampling, the ash pile will be covered with six mil polyethylene plastic weighted down with materials sufficient to ensure that the plastic remains in place.

6.1.1.a Ash Pile - Sampling & Analysis

Ash material currently in the area referred to as the ash pile will be sampled at a frequency of one (1) sample per each 500 cubic yards (cy) and analyzed for RCRA characteristics. Although composite samples, consisting of five (5) samples per 100 cy, are generally requested by the NJDEP, this policy will not be adhered to since data already gathered indicates that this material is primarily a RCRA hazardous waste for the presence of metals.

Based upon the occurrence of PCB's in the soils underlying the ash, a stratified grid sampling method will be employed to fully assess the potential for PCB's in the ash. A total of 36 discrete samples will be collected from the ash at two depths on a 20' grid. Samples will be collected from the 0.5 - 1.0 foot increment and the 2.0 - 2.5 foot increment. All samples will be analyzed for total PCB's.

In addition to analysis for RCRA characteristics and PCB's, nine (9) samples will be collected from quadrants determined by the physical size of the pile for analysis of volatile organics. Samples will be collected from a minimum depth of 1.5 feet to positively bias VOC concentrations. Samples will be analyzed for Volatile organics using current GC/MS methods. Samples will be collected, handled and analyzed in accordance with the site Quality Assurance/Quality Control Plan (QA/QC) set forth in section 8.0 of this plan.



6.1.1.b Ash Pile Removal and Disposal

Upon receipt of analytical results from the laboratory and approval for the disposal of ash into an appropriate disposal facility, ash material will be loaded into dump trailers and transported off-site for disposal.

The ash material is currently in a solid state, and the potential for wind dispersal during loading is presumed to be low. In order to minimize the potential for the spread of ash material during loading the following procedures will be undertaken:

- Six (6) mil polyethylene plastic will be placed adjacent to the pile prior to loading. Plastic will be replaced as necessary during loading to minimize the potential of ash dispersal;
- Truck trailers will be positioned over the plastic covered loading area during loading operations;
- The side of the dump trailer exposed to the loader will be covered with plastic prior to loading;
- 4. Upon completion of loading operations, trucks will be dry brushed of any ash material which may have contacted the outside of the truck trailer or wheels;
- 5. Trucks will proceed to the decontamination pad prior to leaving the site (see section 7.0):

Upon completion of the ash removal, the surface of the area will be sampled in six (6) locations and analyzed for EP Toxic metals PCB's and VOC's. Upon completion of sampling, the area will be covered with 6 Mil polyethylene plastic until remediation of soil is completed. Additional remediation proposed for contaminated soil in this area is described in section 6.1.2 of this plan.



6.1.2 Ash Pile Surrounding Soil

Soil surrounding the ash pile area is reported to contain levels of PHC's, semi-volatile and volatile organics, total metals, and PCB's above NJDEP recommended cleanup values. As previously discussed, prior site activities including that of the Newark Landfill have substantially contributed to the contaminants identified at this and adjacent sites (Berger 1986, Wehran 1988). As evident from the vertical extent of PHC and volatile organic contamination at the site in areas of non-operations, past land uses may have also included disposal of solid wastes contaminated with these constituents (Berger 1986).

Based upon this information, the regional occurrence of greater concentrations of contamination below the surface than at the surface as previously described (section 5.2.1.b and Raviv 1986) and the results of post-ash removal sampling described above, soil under the ash pile will be remediated, if necessary, only for the presence of VOC's and EP Toxic metals based on a comparison of soils underlying the landfill and PCB's in concentrations greater than 50 ppm. Rational for this position stems from the following facts: VOCs and EP Toxic metals have been detected in previous sampling of the ash by the NJDEP, U.S. EPA and Raviv. PCB's have not been found in the ash at levels above 50 ppm.

Based upon the array of potential parameters which may be detected within the municipal ash disposed in this area of the Newark landfill, soil post-excavation sampling is not proposed for parameters other than VOC's and EP Toxic metals since contamination from the two sources may be indistinguishable. Results of post-excavation samples will be evaluated as described above. Samples will also be analyzed for PCB content to determine the extent of contamination above 50 ppm.

see Section 4.0 for background and basis on contaminant levels and past land-use impacts



6.1.3 Furnace Area

Ash material currently on the ground, in the underground collection tanks and within the trough in the furnace area will be prepared for disposal as described herein. the surface of the ground is estimated to be less than 400 cy in total volume; however it is difficult to discern the demarkation between the ash and contaminated soil. Therefore, one (1) composite sample will be collected from material suspected to be ash for analysis. In addition, a composite sample will be collected from each of the two underground open collection tanks and the trough which extends parallel to the furnace and is presumed to contain Samples will be analyzed for the eight (8) EP Toxic metals, EP Toxic herbicides and pesticides, PHC's, PCB's, Ignitability, Corrosivity, Reactivity. Other parameters may be required based upon specifications of the chosen disposal facility(s).

Based upon the analytical results of samples collected during this phase, these materials will be excavated and disposed of before Phase II soil sampling, if they are found to be characteristically RCRA hazardous, or during the Phase III soil removal if they are not found to be hazardous.

6.1.3.a Furnace

Although specific information concerning the residual materials contained in the RCRA empty drums cleaned in this furnace is unavailable, these materials were reported to be from paints, vegetable and petroleum oils and other characteristically non-hazardous and hazardous wastes. Based upon the nature of these materials and that of the drums themselves, metals may be present on the interior and exterior walls of the furnace and associated stack. Therefore, the entire furnace will be decontaminated as described below. Thereafter, the furnace will be demolished and disposed of off-site. Deviations from this plan may be required based upon conditions encountered in the field.

 Openings to the existing underground storage tanks utilized to collect wash waters at the output end of the furnace will be covered with 1/2 inch thick plywood sheets to eliminate the potential for injury to personnel. Plywood will be marked appropriately with orange paint or a similar bold



marking to warn personnel of the underlying structure.

- The ground surface within twenty (20) feet of the furnace will be completely covered with six (6) mil polyethylene plastic (poly) to minimize additional impacts to the soil and groundwater. Continuous rolls will be used where possible. Seams where sheets of poly meet will be overlapped a minimum of one (1) foot and joined with an appropriate tape. Seams are to be continuously sealed with no apparent gaps.
- 3. Artificial berms, constructed of 4" by 4" wooden beams or similar, will be placed under the perimeter of the poly to divert water spray toward any natural low points where decontamination waters can be recovered for disposal. Under no circumstances will disturbances of the existing soil be made to create berms or other water collection structures due to the presence of contamination known to exist therein.
- 4. The interior and exterior of the furnace will be decontaminated using a low volume high pressure water spray. Wash waters will be prepared with a mild soap solution.
- 5. Any significant areas of buildup of residual material will be removed using wire brushes and scrapers where possible.
- 6. Water and solids generated during the washing procedure will be directed to any evident low points in the artificial containment area and collected via a vacuum or pump and placed in appropriate DOT shipping containers. Solids generated will be collected and placed in containers as well. Samples will be collected of rinse waters for disposal purposes and disposed of in accordance with state and federal regulations or discharged to the sanitary sewer under permit.
- Upon completion of the decontamination process, used polyethylene sheeting will be placed in containers for disposal.

Upon completion of the decontamination procedures,



samples will be collected from the interior and exterior of the structure. A total of six (6) chip tests or similar will collected and analyzed for EP Toxic metals (8) and PCBs.

6.1.3.b Furnace Demolition

Upon receipt of analytical results from chip tests referenced in section 6.1.3.a and approval of the structural material(s) into an appropriate land disposal/recycling facility, the furnace will be demolished and loaded into trucks for off-site disposal. Scrap metal and/or other reclaimable debris will be recycled where possible. All materials removed for recycling and not manifested as a regulated material will be accompanied with a Straight-Bill-Of-Lading for tracking purposes.

6.1.4 Building No. 2 Interior and Waste Materials

As previously indicated, floor sweepings from the cleanup of adjacent buildings are piled within the one story building (Bldg No.2) located within the furnace area. Based upon measurements taken in the field, there are approximately 65 cy of material in this pile. In addition, approximately 350 drums of solid debris from floor sweeping and liquids, reportedly generated during the cleaning of the water separator tank and trench, are also situated in the building. These materials will be sampled prior to removal from the site as described below.

6.1.4.a Debris Pile Sampling

Debris currently piled within Bldg No. 2 was reportedly generated from the sweeping of site buildings and has an estimated volume of 65 cy. Solidified paint is also noted on the surface of this pile and, therefore, sampling for disposal will include an evaluation for volatile organics.

One (1) composite sample, made up of five (5) discrete samples, will be collected from the debris and analyzed for EP Toxic Metals, herbicides and pesticides, PCB's, PHC's, corrosivity and reactivity.

6.1.4.b Drum Sampling and Consolidation

Drums containing solid waste will be segregated from



those containing any liquid wastes within Building No.2. Thereafter, drum contents will be physically and chemically compared prior to commencing further activities as described below.

SOLID WASTE

All drums and samples will be marked with corresponding sample numbers and handled in accordance with the site QA/QC plan. Individual samples will be initially screened for; reactivity, corrosivity, and physical appearance. Thereafter, similar samples will be composited in the laboratory at a frequency of approximately one composite per ten (10) drums. Composite samples will be analyzed for the eight (8) EP Toxic metals, EP Toxic herbicides and pesticides and PCB's. Drums found to contain characteristically hazardous RCRA wastes may be subject to additional analyses for HOC's.

Based upon the analytical results of samples, drums containing similar wastes will be combined in a 20 cy roll-off container staged immediately outside of the south end of Building No.2 in preparation for sampling and analysis. Upon completion of consolidation, the roll-off container will be temporarily moved to within Building No.4 to protect it from the environment.



LIQUID WASTE

Liquid wastes and sludges in drums which have been segregated as described above, will be sampled for analysis as described herein. Any drums found to be leaking will be over-packed prior to staging for waste sample collection. Samples will be collected with a Composite Liquid Waste Sampler (Coliwasa) or equivalent and placed in separate sample bottles as described in section 8.0 of this plan. All drums and samples will be marked with corresponding sample numbers and handled in accordance with the site QA/QC plan.

Individual samples will be initially screened for; reactivity, corrosivity, ignitability, and physical appearance. Similar samples will be composited by the laboratory at a frequency of approximately one composite per ten (10) drums. Composite samples will be analyzed for the eight (8) EP Toxic metals, EP Toxic herbicides and pesticides and PCB's. Additional analyses including BTU's, VOC's, etc. may be conducted based upon the requirements of specific disposal facilities.

Hazardous wastes in drums which do not meet DOT specifications or can not be properly secured will be overpacked in DOT approved containers.

Upon approval from a permitted Treatment, Storage and Disposal Facility (TSD), materials will be prepared for off-site disposal and shipped to the appropriate facility in accordance with state and federal regulations.



6.1.4.c Building No.2 Interior

Upon removal of the waste materials currently within Building No.2, the interior of Building No.2 will be decontaminated as follows:

- All windows of Building No.2 will be closed and sealed. In situations where glass has been broken out of windows, 4 mil polyethylene plastic will be placed over the open area.
- 2. Sandbags or a similar diking material will be placed at the interior of doorways or other routes to the environment prior to cleaning operations. Any floor drains noted upon completion of removal of solid wastes referenced above will be temporarily closed with rubber or wooded plugs and sealed with an appropriate caulking material.
- 3. The interior of Building No.2 will be decontaminated using a low volume high pressure water spray. Wash waters will be prepared with a mild soap solution.
- 4. Water generated during the washing procedure will be squeegeed to any evident low points in the floor and collected via a vacuum or pump and placed in appropriate DOT shipping containers. Wash waters generated during the decontamination of the above-referenced structures will be containerized and disposed of in accordance with current regulations or discharged to the sanitary sewer under permit.

Upon completion of the cleaning, the interior of the building will be wipe sampled as described in Section 8.0 of this plan. Analytical parameters will be based upon the types of materials identified during the Phase I waste sampling and those contaminants which could potentially remain after this cleaning operation.

6.1.5 Building No.1

Operations within Building No.1 included the washing of RCRA empty drums which may have generated RCRA hazardous wastes. Since it is presently not known whether hazardous wastes were generated in this building, sediments remaining in the



liquid collection troughs will be sampled for RCRA characteristics for this evaluation. Upon receipt of the analytical results, sediments and solid waste in the troughs will be removed and staged for disposal. The troughs will be decontaminated as described below.

6.1.5.a Sampling

Three (3) composite samples will be collected from sediments within the troughs of the building floors. Samples will be composited in the field by volume as described in section 8.0 of this plan. Samples will be analyzed for the eight (8) EP Toxic metals, EP Toxic herbicides and pesticides, Ignitability, Corrosivity, Reactivity, PHC's, and PCB's.

6.1.5.b Waste Removal and Trough Decontamination

Upon receipt of the composite sample analytical results, solid waste materials currently in the troughs will be removed and placed in appropriate containers for off-site disposal.

Troughs will be decontaminated with low volume, high pressure water spray as described in Section 6.1.4.c. Wash waters will be collected, containerized and sampled for off-site disposal. Analytical parameters will be dependent upon results of sediment samples collected from the troughs.

Upon classification and approval into an approved disposal facility, solid waste and sludges will be prepared for off-site disposal and shipped to the appropriate facility.

Wash waters generated during the decontamination of the above referenced structures will be containerized and disposed of in accordance with current regulations or discharged to the sanitary sewer under permit.

6.1.6 Building No.3 Interior

RCRA characteristically hazardous soil/ash is reported to be present in a portion of Building No.3 where concrete flooring does not exist. Based on results of U.S.EPA sampling in June 1988 (sample # 112201), leachable cadmium exists above the maximum allowable concentrations (MCL) set forth in 40 CFR 261.24. In addition, EP Toxic lead levels



were near the MCL for lead.

6.1.6.a Sampling

Based upon the occurrence of characteristically hazardous soil/ash within this area, a soil sampling program will be undertaken in building No.3 to determine the vertical extent of metal contamination. Soil contamination within the building is presumed to be surficial and therefore samples will be collected from the 0.5 to 1.0 foot sampling increment. A total of five (5) samples will be collected in this area. Samples will be analyzed for EP Toxic metals (8).

6.1.6.b Soil/Ash Removal and Capping

If results of samples collected as described in section 6.1.6a are found to be less than the MCL set forth in 40 CFR 261.24, soil/ash will be excavated to 1.0 foot and staged for additional sampling prior to disposal. Upon completion of the removal, the area will be capped with a minimum of six (6) inches of concrete to form a contiguous slab with the remaining portions of the building floor.

6.1.6.c Decontamination

Upon completion of the soil/ash removal and capping as described above, the floor of Building No.3 will be decontaminated using low volume, high pressure water as described in section 6.1.4.c.

Wash waters generated during the decontamination of the above referenced structures will be containerized and disposed of in accordance with current regulations or discharged to the sanitary sewer under permit.

6.1.7 Water Treatment Area

Based upon information from BB&D, the water separator trench and tanks were used to separate primarily solids from the liquid waste wash water generated during the closed head drum cleaning operation and the cooling of drums exiting the furnace. Although oils and organics were reported to occur within the liquid in small amounts, the separated materials primarily consisted of solids.

Residual materials within the separator were cleaned out



subsequent to the consent agreement by BB&D and stored in drums for later disposal. These drums are currently stored in Building No.2 in the furnace area.

Sediments are currently present within the trench and underground 5,000 gallon settling tank. Although this material may be residue from site operations, it is believed to probably reflect wind blown materials that have collected since cessation of site operations in 1983.

6.1.7.a Treatment Tank Sampling

Settling tanks and trenches will be visually inspected to determine the physical amounts of sediment and water within these structures. Samples will be collected of sediment and water from each of the three (3) water treatment units in this area, if applicable. These structures include the separator trench, the 5,000 gallon underground settling tank and the 60,000 gallon above ground settling tank. Sediment samples will be analyzed for EP toxic metals (8), PHC's, PCB's, Reactivity and Corrosivity.

Aqueous samples will be collected from any aqueous phases noted during the inspection of the three (3) structures referenced above. Based upon current site conditions, the separator trench and 5,000 gallon settling tank are filled with water, presumably from surface run-off and precipitation. Samples will be analyzed for total RCRA metals, PCB's, Corrosivity and Ignitability (if phases are observed).

6.1.7.b Treatment Cleaning

Based upon the analytical results of samples collected from the sediment and water within these structures, water will be removed from the separator trench, 5,000 gallon separator tank and 60,000 gallon above ground tank (if applicable) and disposed of in accordance with current regulations or discharged to a sanitary sewer under permit. Thereafter, the trench and tanks will be cleaned of all sediment for subsequent disposal.

If visible petroleum stains are present on these structures after removal of all sediments, the trench and separator tanks will be decontaminated using low volume, high pressure water as described in Section 6.1.4.c.



Wash waters generated during the decontamination of the above referenced structures will be containerized and disposed of in accordance with current regulations or discharged to the sanitary sewer under permit.



6.2 PHASE II - SITE SAMPLING AND ANALYSIS

Introduction

Phase II of this Closure and Remedial Action Plan calls for the implementation of a Site Sampling and Analysis plan (SSAP). This SSAP will address the potential horizontal and vertical extent of contamination above the groundwater elevation in the furnace area, the ash pile area and the water treatment area. Upon receipt of the analytical results, area specific plan and profile drawings will be prepared to graphically indicate the extent of identified contamination within these areas. Reporting will include a written interpretation of the analytical results, a summary of field observations and recommendations for remedial action and post excavation sampling and capping, if necessary.

Although current NJDEP soil sampling frequencies call for sampling at a frequency of one (1) sample per each thirty (30) linear feet, or one (1) sample per each nine hundred (900) square feet, sample frequencies for delineation sampling proposed herein have been increased to every fifty (50) feet due to the potential extent of contamination in the subject areas. Samples will be collected from two (2) depths at each sample location (see Dwg. Sheet No. BB-006). Since current information suggest wide spread contamination within the furnace and water treatment areas, samples will be subject to complete Priority Pollutant + 40 (PP + 40) analysis. Based upon the results of these analyses, additional delineation sampling or post excavation sampling will target parameters identified during this phase of work.

Upon completion of any soil removal during Phase III remedial activities in these areas, post excavation sidewall samples will be collected at a frequency of one (1) sample per each thirty (30) linear feet. Although it is currently anticipated that cleanup of soil will extend to groundwater elevation, reported to occur at approximately 3 to 7 feet below surface elevation, areas not remediated to groundwater elevation will be sampled at the bottom at a frequency of one sample per each nine hundred (900) square feet.



6.2.1 General Test Pit Locations and Sampling Strategy

The decision to use test pits excavated with a backhoe, rather than soil borings installed with a drill rig, was prompted by the increased ability to expose soil profiles to visually characterize the soil. This may be particularly important in determining areas of the former Newark Landfill and segregating the impacts of the two operations.

Test pits will be excavated to groundwater elevation, not to exceed a maximum depth of seven (7) feet. Depending upon the concentration of organic vapors when the pit is completed, samples will be collected with spatulas or with a hand driven auger. Upon the completion of sampling at each location, each test pit will be lined with 4 mil polyethylene plastic and backfilled with the excavated material.

Prior to relocating to each subsequent sample location, the backhoe bucket will be cleaned with high pressure water. Decontamination waters will not be collected and containerized during this operation.



6.2.2 Soil Sampling and Analysis

6.2.2.a Furnace Area

Eleven (11) test pit locations have been selected within the furnace area (Drawing BB-006). Locations were selected at a frequency of one sample per each fifty (50) linear feet.

A total of twenty two (22) environmental samples will be collected during this sampling event. Two (2) soil samples will be collected from each test pit: one from either the 0 to 1' increment or on a positive bias, and the second from groundwater elevation or the bottom of the test pit if groundwater exceeds seven (7) feet. As previously indicated, each of the twenty two (22) environmental samples will be analyzed for Priority Pollutants + 40 and total petroleum hydrocarbons.

In addition to the collection of samples to detect environmental contamination, six (6) samples will be collected for analysis of EP Toxic metals. Sample locations will be selected based upon prior analytical data and on a positive bias at the time of sampling.

Specific information concerning Quality Assurance and Quality Control practices for this sampling event are described in Section 8 of this plan.

6.2.2.b Building No.'s 1,2 & 3 Interiors

Upon removal of the waste materials currently within Building No.2, the removal of residual sediments in the troughs in Building No.1, the removal of RCRA hazardous soil/ash in Building No.3 and the power washing of these buildings as specified in Phase I, the interior of Building No.'s 1, 2 and 3 will be wipe sampled to detect residual contamination from materials identified within solid wastes currently within those structures. Wipe samples will be collected from three positively biased locations in Building No.'s 2 and 3. Similarly, three (3) positively biased locations will be selected within the troughs in Building No.1.



6.2.2.c Water Treatment Area

Contamination within the water treatment area appears to be typified by localized high concentrations of PHC's and PCB's. Additional identified contaminants include metals and volatile and semi-volatile organics. Based upon these past results, all soil samples collected within this area during the Phase II investigation will be analyzed for Priority Pollutants + 40 and total petroleum hydrocarbons (PHC).

Eleven (11) test pit locations have been selected within the area of the water separation tanks and trench (Drawing BB-006). Locations were selected at a frequency of approximately one (1) sample per each fifty (50) linear feet within this area.

A total of twenty two (22) environmental samples will be collected during this sampling event. Two (2) soil samples will be collected from each test pit: one from either the 0 to 1' increment or on a positive bias and the second from groundwater elevation or the bottom of the test pit if groundwater exceeds seven (7) feet.



6.3 PHASE III - REMEDIATION OF SOIL

Phase III of this Closure and Remedial Action Plan will include the excavation and removal of contaminated soil, the removal of the underground collection tanks located at the output end of the furnace and the excavation of underground piping from the collection tanks to the water separator. Excavations will be undertaken in accordance with the procedures set forth below. The horizontal limits of excavation for this area will be determined to the extent possible through sampling described in Phase II. The vertical extent of excavation will be determined to the extent possible through sampling, as described in Phase II, and by groundwater elevation since excavation below the groundwater table is not proposed.

Remediation of soil contamination identified during the sampling set forth in Phase II of this Closure and Remedial Action Plan (Section 6.0) shall be performed by removing all contaminated soil within the following parameters:

- Areal Extent All soil identified as being contaminated above cleanup criteria (other than those soils underlying existing structures which are consistent in comparison with the background soil conditions) shall be excavated.
- Vertical Extent Excavation of contaminated soil shall be performed to the top of the groundwater table.

Remediation shall be performed in separate and distinct phases based upon the areas of concern.

The cleanup criteria, ie. Performance Standard, is described in section 6.0.1.b. Background and basis is provided in sections 3.0 and 4.0.



6.3.1 Site Preparation

Prior to the commencement of any excavation activities within the areas of contaminated soil, the following support facilities will be constructed and operational. These facilities have been developed and located in such a manner as to permit rapid removal of contaminated material with full regard to proper environmental management.

6.3.1.a. Remediation of Soil Contamination

The intent of this remediation plan is to delineate and remove from the site, to the extent practicable, source contaminated soils to ground water elevation or the extent of vertical soil contamination in the SWMUs, with the approval and concurrence of the NJDEP. For the purposes of this remediation effort, the furnace area and water treatment area, defined as a Contaminated SWMU, as described in Sections 4.0 and 5.0 of this Plan, will be excavated, stockpiled and sampled for disposal characteristics.

6.1.3.b. Decontamination Pad Construction

The decontamination pad will consist of a 3" high bermed concrete monolith underlain by crushed stone and a 20 mil or similar polyethylene liner. An area approximately 20' x 15'x 2' deep will be excavated in the Contamination Reduction Zone (CRZ) and the polyethylene liner will be laid down as a secondary containment measure. Approximately 12 cubic yards of crushed stone will be backfilled on top of the polyethylene liner to a depth of 1'. The concrete pad will consist of 6" of poured concrete sloped to a concrete sump pit (2' x 2' x 1') in the corner of the decontamination pad (figure 6-1). Prior to leaving the site, each vehicle will stop on the pad for a high pressure wash. The rinse waters generated during this procedure will be pumped from the sump pit into 55 gallon 17-H DOT approved drums for disposal at a licensed disposal facility or discharged to the local POTW, if approved by the municipal authority pursuant to N.J.A.C. 7:14A-1 et seg.



6.3.1.c. Soil Stockpile Areas

Soil stockpile areas located in the southwestern side of the property, shall be constructed in accordance with detail No.2, sheet BB-007 in the locations shown on Drawing BB-007 for the temporary storage of non-hazardous RCRA waste soil. Prior to commencing excavation of contaminated soil, the construction of soil stockpile areas shall be completed and operational.

The purpose of soil stockpile Area A is to provide a pre-sampling area for contaminated soil. Any leachate/stormwater collected within the soil stockpile area will be sampled and disposed of off-site.

6.3.1.d. Contaminated Zones

Contaminated zones shall be delineated in the field through the use of caution tape and/or snow fence. The contaminated zones shall be defined based on:

- OSHA setback limits for open excavations.
- Air quality monitoring results to ensure that each contaminated zone also includes all areas where air quality exceeds the maximum permissible level of 5 ppm total VOC.
- The soil stockpile area.

This method of delineating the contaminated zone shall be implemented in the field as follows:

- The Health and Safety Officer in consultation with the Project Manager shall determine what setbacks, if any, are to be required by OSHA based on the depth of excavation for that particular area. Any setbacks required shall be delineated in the field.
- 2. The initial limits of each contaminated zone shall be established around the perimeter of other areas identified through the use of "Caution" tape or equivalent.
- During excavation, each contaminated zone



shall be further adjusted if necessary to ensure that all areas where air quality exceeds 5 ppm total VOC for more than one (1) minute are also included.

4. The Contaminated Zone shall remain in place at each excavation site until the area has been backfilled to grade with clean soil.

Upon commencement of storage activities within soil stockpile Area A, that area shall be considered to be a Contaminated Zone and shall be isolated by caution tape at its perimeter. The same air quality criteria used to expand the Contaminated Zones of excavation shall be applicable to this area as well.

6.3.1.e Contamination Reduction Zone

A Contamination Reduction Zone (CRZ) shall be constructed in the southern side of the property as shown on Drawing BB-007. Within this zone, a decontamination pad shall be constructed as shown on Drawing BB-007. All vehicles exiting the Contaminated Zone shall be decontaminated with high pressure water. All decontamination water shall be disposed of offsite at a licensed disposal facility or to the local POTW, if approved by the municipal authority pursuant to N.J.A.C. 7:14A-1 et seq.

6.3.1.f. Soil Erosion Control

All loose debris, stone and crushed asphalt shall be removed from the area and from areas of access required to perform the work. Prior to excavation of each area, sedimentation fences shall be installed downgradient of each excavation area and run-on control berms shall be constructed upgradient as necessary to control sediment transport from the work area and run-on to the work area respectively.

A soil stockpile area shall be prepared in accordance with Figure 6-1 in phases as indicated. At least one (1) phase of the soil stockpile area shall be constructed prior to the commencement of excavation work.



6.3.2 Contaminated Soil Removal

Each area of contaminated soil removal shall be operated as a separate phase of the remedial action. Prior to commencing excavation in a new area, that area will be delineated as a Contaminated Zone.

The approximate limits of each soil removal area are shown on Drawing 1 and are based on the following criteria:

- 1. The areal extent of the excavation shall include all soil described in section 6.1.
- The depth of each excavation shall be to the top
 of the groundwater table or the extent of vertical
 contamination above the groundwater table.
- 3. Excavation of contaminated soil shall not occur at a depth greater than the footing depth of a building or structure without the approval of the project engineer, except when the slope of the excavation exceeds 1' V: 1' H away from the footing, in order to protect the structural integrity of that unit.

Excavation shall commence in accordance with the above criteria until all soil subject to the cleanup criteria has been removed from the area and stockpiled in the soil containment area for subsequent transportation offsite.

6.3.3 Post Excavation Sampling

Post Excavation Sampling of the perimeter sidewalls will be conducted to determine if sufficient soils have been removed from the horizontal axis of the excavation to meet the cleanup criteria. Perimeter sample locations and frequencies will be based upon the distance to locations previously determined to be clean and perimeter length and shape. In general, locations will be spaced a minimum of 30 linear feet apart.

Samples will be collected on a positive bias basis at the level where contamination has been previously identified in the adjacent vertical strata. Sampling methods, equipment, and Quality Assurance and Quality Control measures will be the same as indicated in Section 8.0 of this plan.



Analytical parameters will be subject to determination upon receipt of results from delineation sampling performed in accordance with Section 6.2 of this Plan.

6.3.4 Sampling of Stockpile

All stockpiled soil shall be sampled only for the purpose of waste classification in accordance with RCRA criteria for ultimate disposal. A site specific sampling protocol and QA/QC Plan is provided in Section 8.0 of this plan.

6.3.5 Disposal of Stockpile

All stockpiled soil shall be disposed of in accordance with approvals to be received from properly licensed facilities based on the results of sampling performed under Section 6.3.4.

6.3.6 Demobilization

Upon completion of all construction activities set forth in this Plan, support structures and equipment shall be demobilized from the site. Demobilization shall be performed as follows:

- a. The soil stockpile areas shall be decommissioned and disposed of. All residual soil and the entire liner shall be excavated and disposed of.
- b. All equipment utilized for this project shall be thoroughly decontaminated and all decontamination water shall be disposed of as previously described. Prior to the demobilization of equipment utilized in the excavation, loading or sampling of TSCA regulated material, it shall be triple rinsed with an appropriate solvent (diesel fuel).
- c. All used personal protective equipment (i.e. tyvek suits, boots, gloves, etc.) shall be disposed of.



7.0 MEASURES TO MINIMIZE ENVIRONMENTAL IMPACT

In addition to the construction of the environmental controls discussed in Section 6.3 of this plan; i.e., lined soil stockpile areas, contamination reduction zone and temporary runoff control measures, the following considerations will be addressed. They are presented based on routes of exposure as follows:

- 1) Air Quality Monitoring/Control
- Stormwater Management
- 3) Groundwater Management

7.1 AIR QUALITY MONITORING/CONTROL

Air quality monitoring will be conducted during the remediation of the BB&D Site as follows. Based upon results and trend data from initial monitoring, monitoring frequencies will be decreased or eliminated for parameters set forth in section 7.1.2 below.

7.1.1 Air Quality Monitoring, General

The contractor will establish sampling locations to include: one perimeter upwind location that will represent ambient air quality, and one perimeter downwind station to monitor the impact of ongoing remediation on air quality. The downwind station will be relocated daily based upon actual wind direction at the time of remedial activities.

All sampling instruments, sampling methods and analytical methods will be USEPA-approved, and/or NJDEP-approved, as applicable. Technical personnel who perform air quality monitoring will have adequate and appropriate training regarding operation of instruments, collection and handling of samples and interpretation of air quality and relevant meteorological data.



7.1.2 Volatile Organic Monitoring

Continuous monitoring for volatile organic compounds will be performed at the excavation area during the remediation. This will be accomplished by the use of a flame ionization detector (OVA) or photoionization detector (HNU/TIP). Additionally, hourly monitoring will be performed at the downwind perimeter.

In the event that either VOC emissions exceed 5 ppm offsite or unacceptable levels of fugitive dust are observed off-site, all construction work shall cease and the problem(s) shall be mitigated as follows.

7.1.3 Air Quality Control VOC Emissions

The following measures will be employed as necessary to minimize VOC emissions.

- Decrease the size of the active excavation area.
- 2) Cover the source with 4 mil. polyethylene.
- 3) Cover the source with 3M Vapor Suppression Foam.

7.1.4 Air Quality Control Particulate Contamination

Off site

There are two potential ways in which contaminants could be spread from the project area. The first is from spillage as a vehicle exits the site. In order to ensure that this problem does not occur, all vehicles shall be thoroughly decontaminated on the decontamination pad prior to leaving the project area. Additionally, trucks will be covered with tarpaulins before they leave the site in compliance with DOT specifications.

The second potential cause of contamination is fugitive dust. This problem will be managed through the application of water and/or calcium chloride to all contaminated soil which may become airborne due to site activities. Additionally, excavated material in the soil stockpile area will be covered with 6 mil polyethylene whenever it is inactive to eliminate unnecessary exposure to wind.



7.3 GROUNDWATER MANAGEMENT

All work to be performed under this plan will be above the groundwater elevation. Any groundwater encountered during the construction of these facilities shall be pumped as required and disposed of either at a permitted commercial waste water treatment plant or at a POTW upon approval of the Municipal Utilities Authority in conformance with N.J.A.C. 7:14A-1 et seq.



Solid Waste Facility Permit for the Essex County Resource Recovery Facility, City of Newark, Essex County, New Jersey, Facility Registration Number 0714X1SP01.

This Solid Waste Facility Permit which includes the Certificate of Approved Registration and Engineering Design Approval (hereinafter "Permit") is conditioned upon the compliance with the implementation of the following:

1. Permitted Waste Types

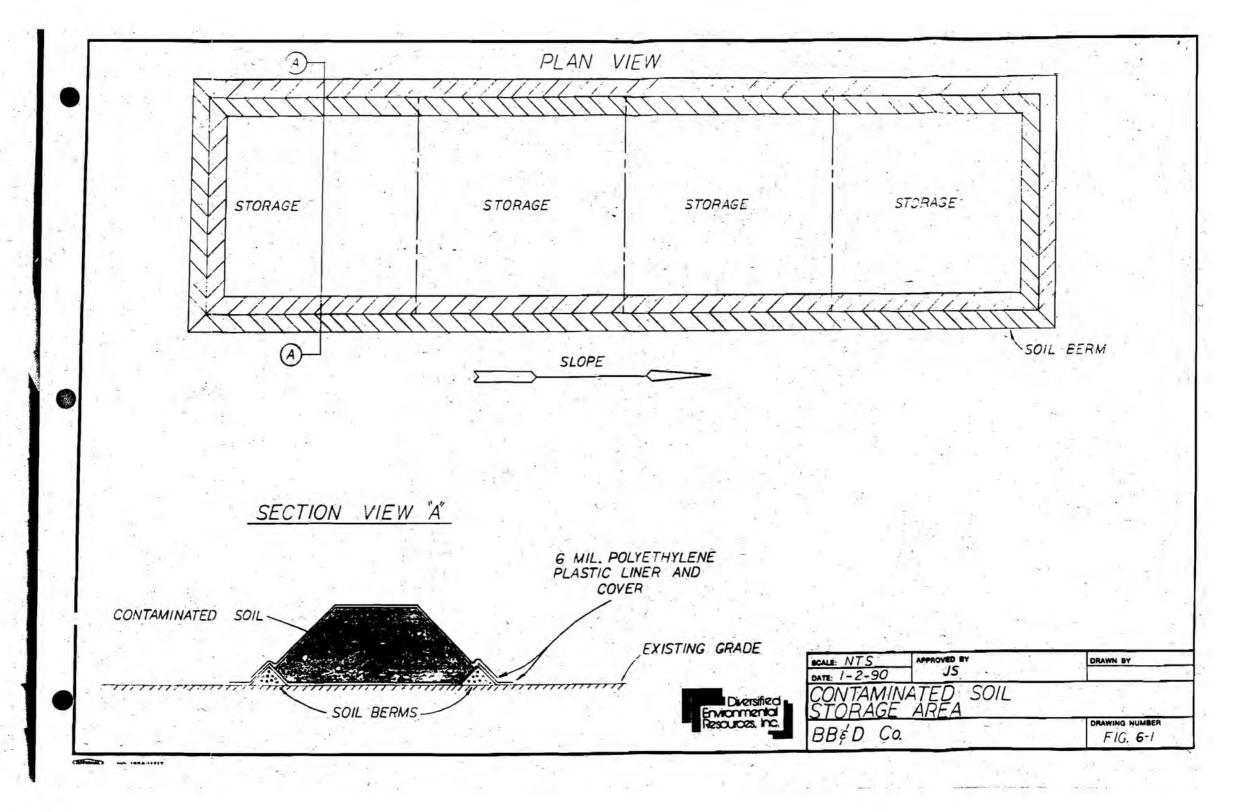
The following materials may be accepted for disposal at this facility:

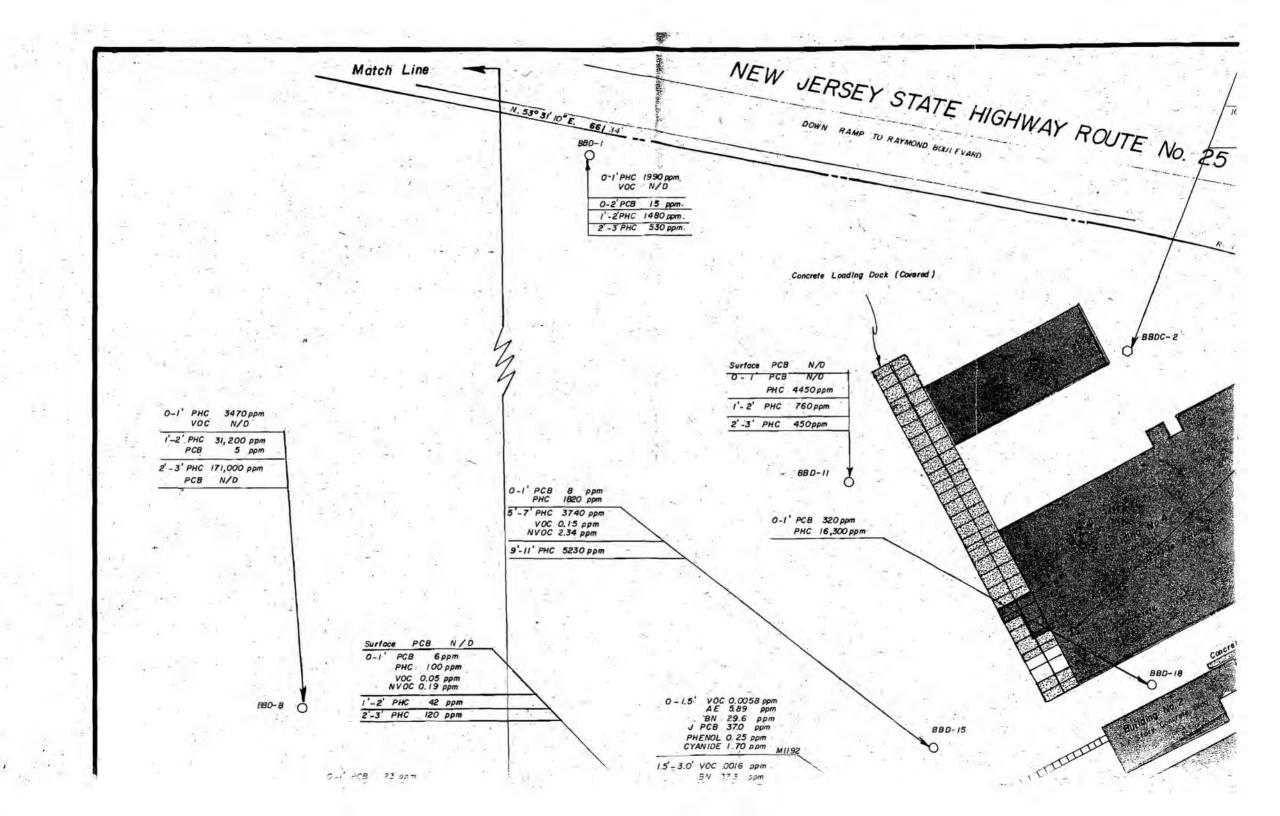
TYPE	WASTE
10	Municipal waste (household, commercial and institutional)
23	Vegetative waste
27	Dry industrial waste (except those prohibited subcategories listed below)

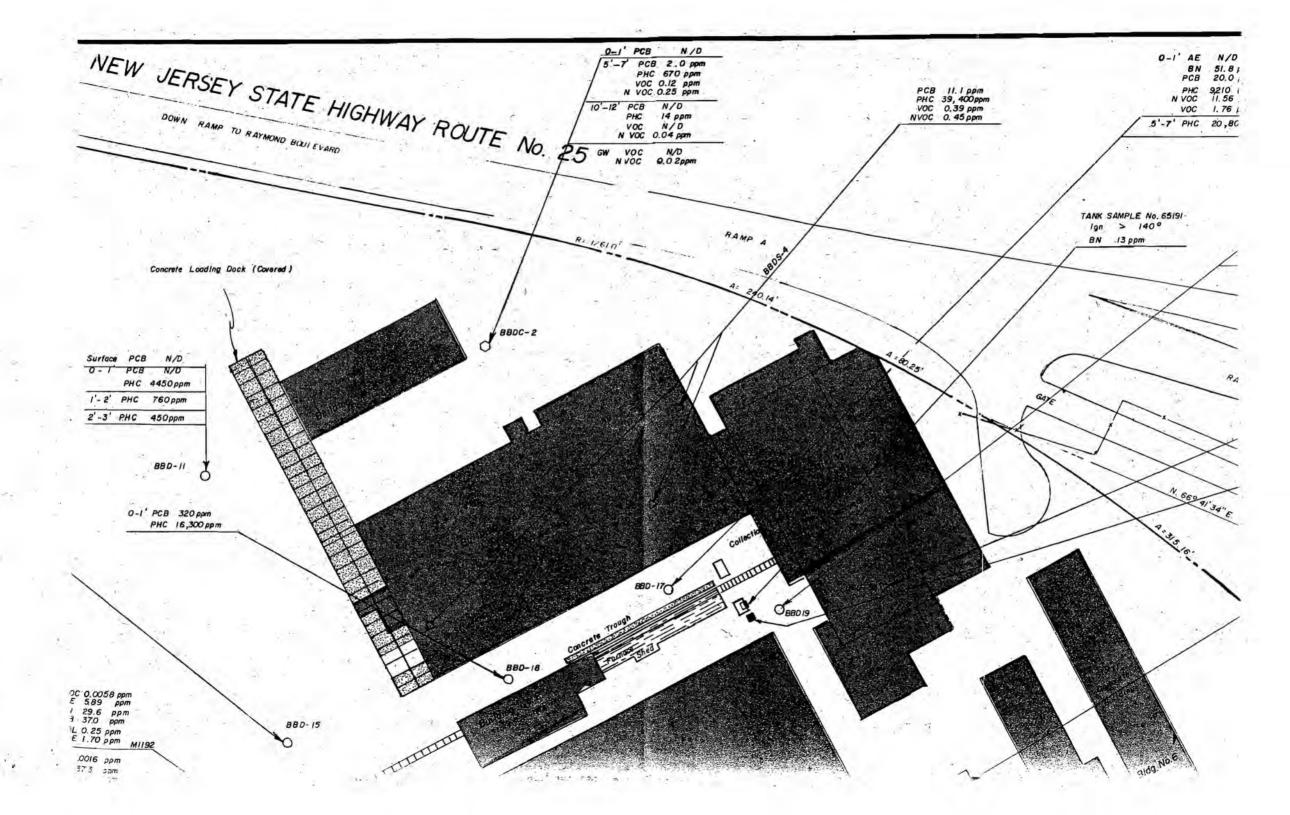
2. Prohibited Waste Types

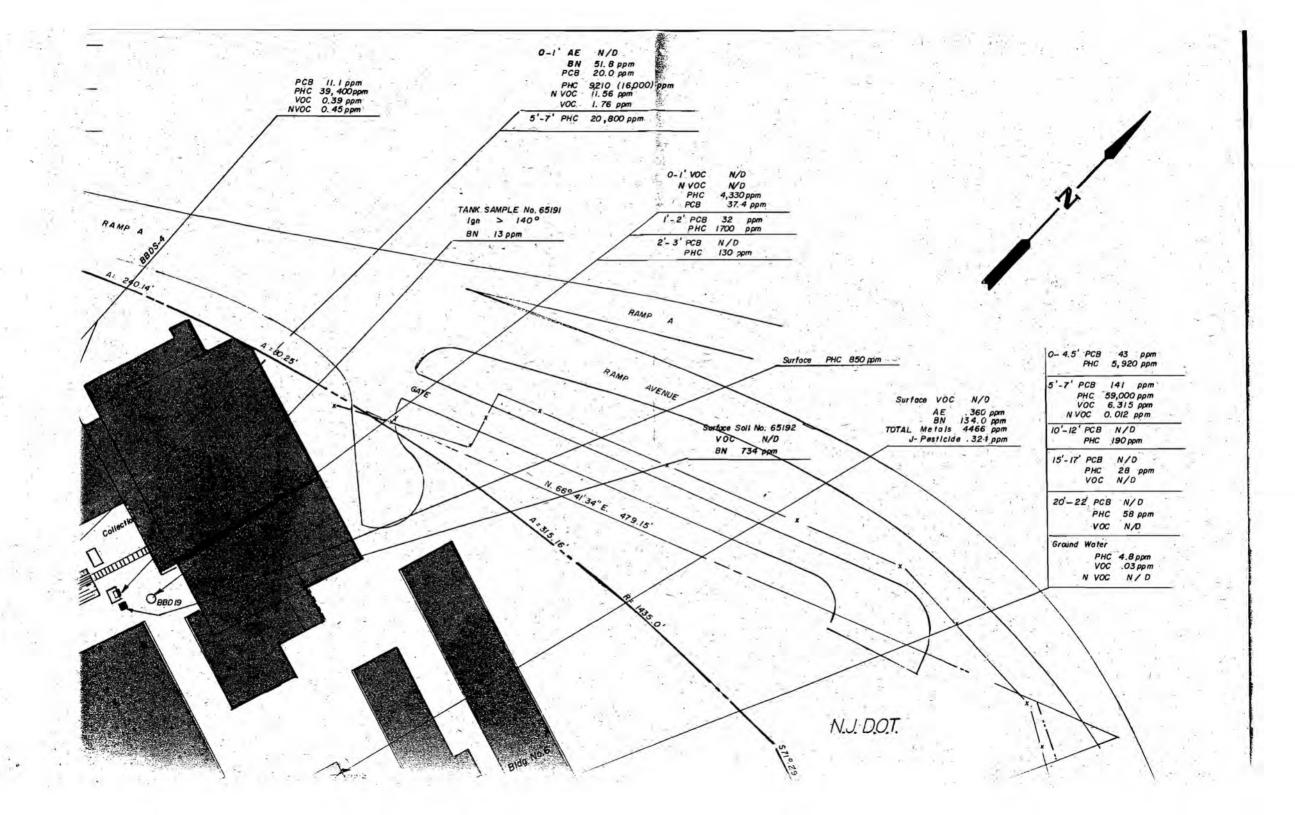
The following materials are specifically prohibited for disposal at this facility:

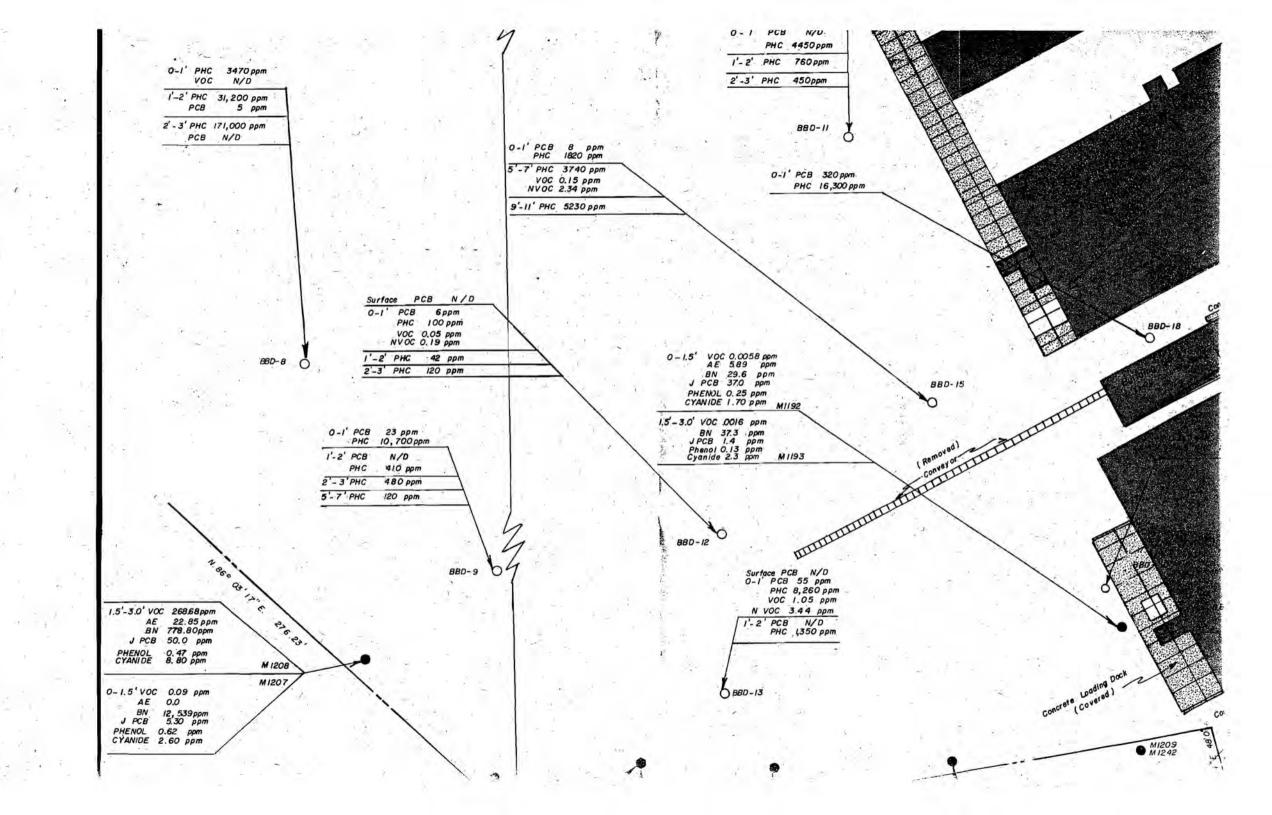
TYPE	WASTE
12	Dry sewage sludge
13	Bulky waste
25	Animal and food processing waste
27	Dry industrial waste (specifically the following subcategories only: Hazardous waste as defined in N.J.A.C. 7:26-1.4, N.J.A.C. 7:26-8 and 40 CFR 261 which is generated by small quantity generators (7:26-8.3); non-hazardous oil spill clean-up waste; dry non-hazardous pesticides; research and development process waste; asbestos containing materials such as ceiling
-	tiles and insulation; and contaminated soils)
72	Bulk liquid and semi-liquids
73	Septic tank cleanout wastes
74	Liquid sewage sludge

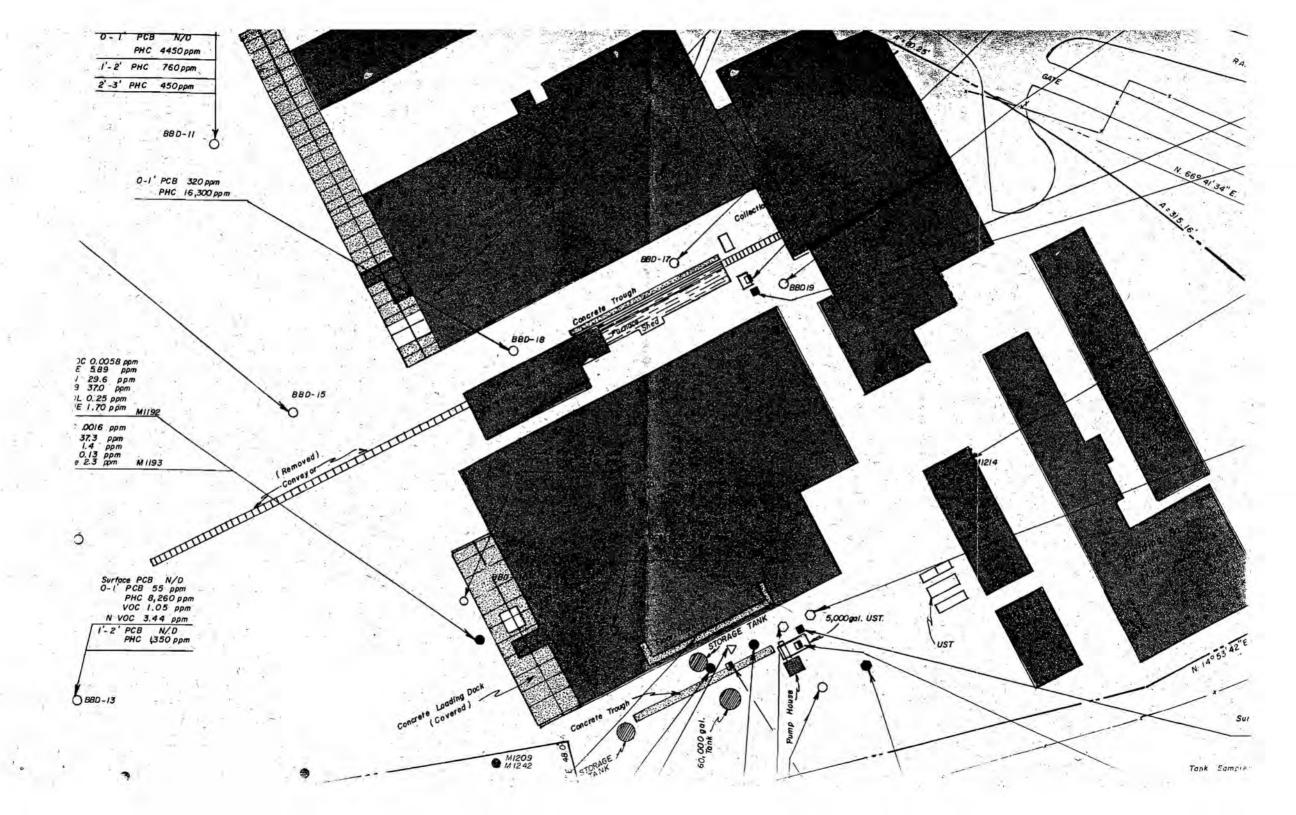


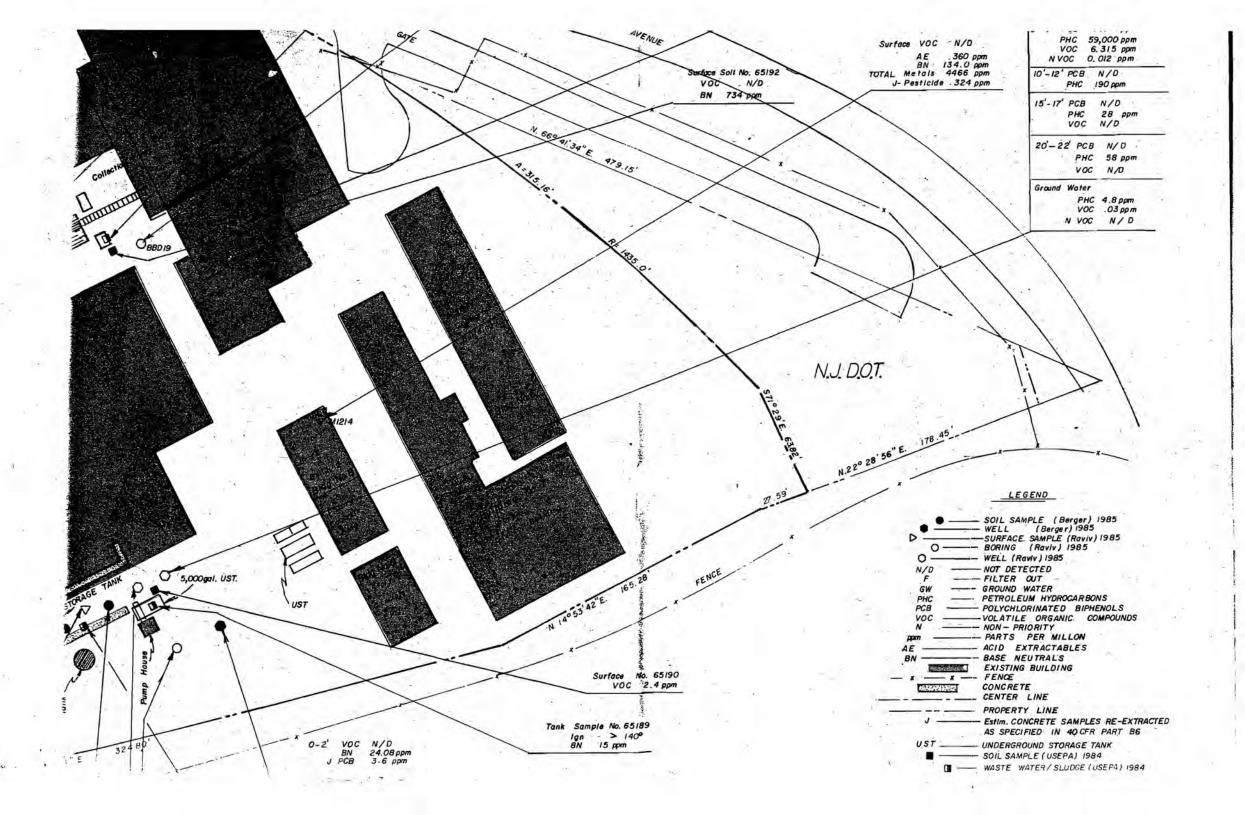


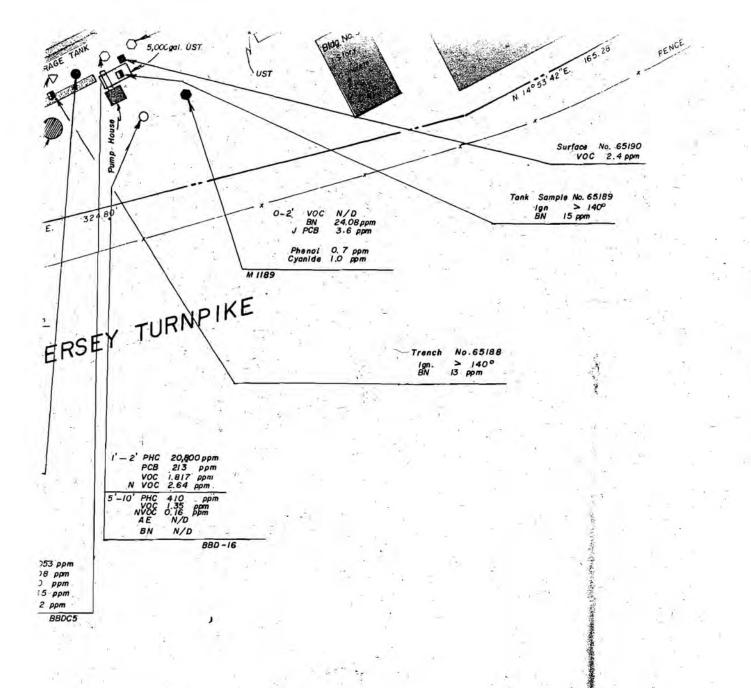








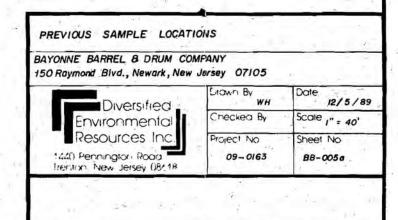


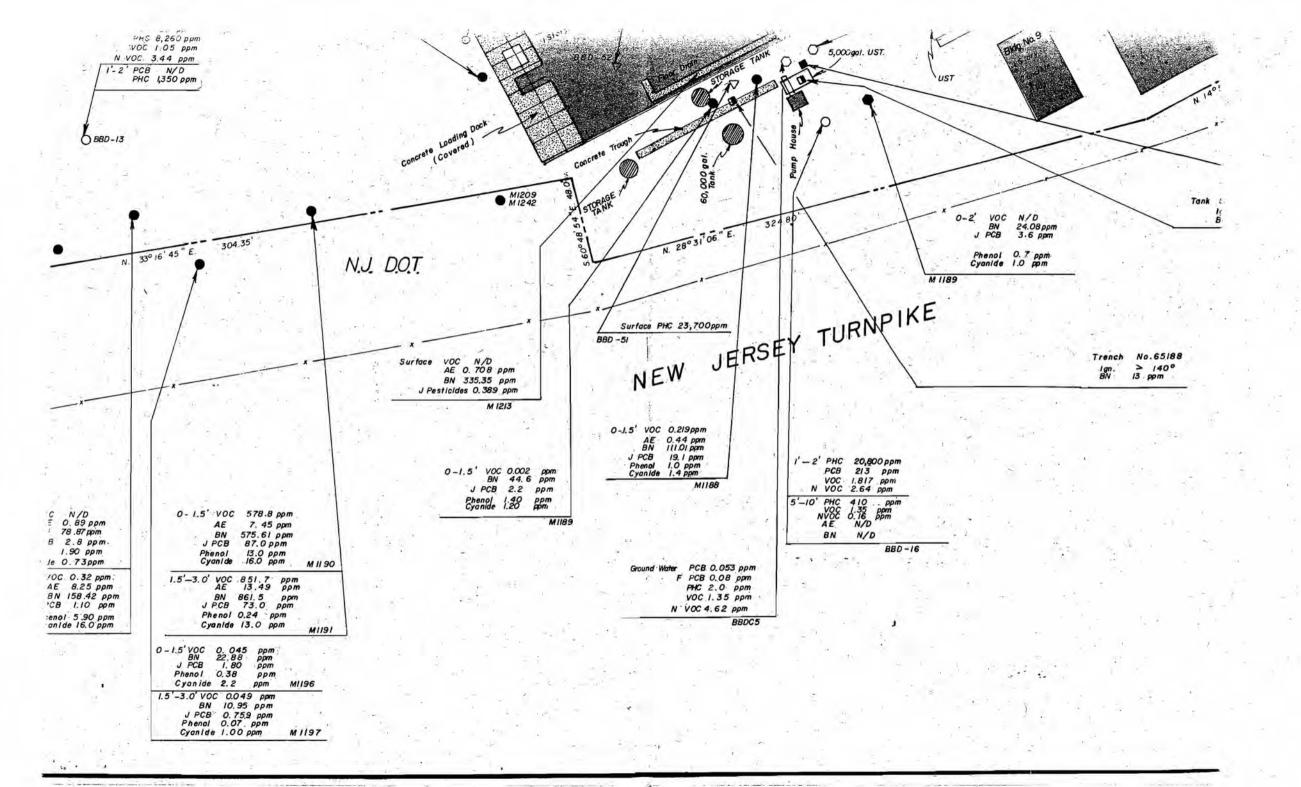


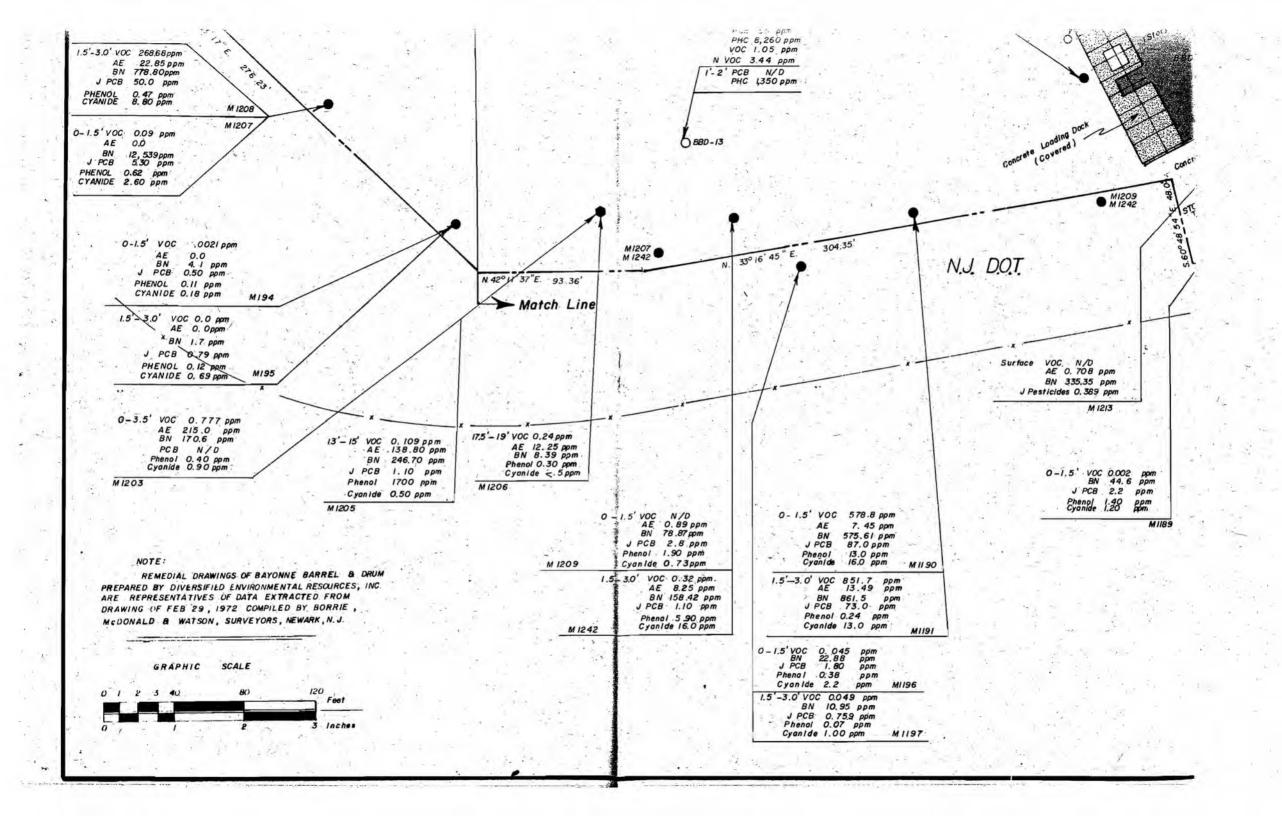
GROUND WATER PETROLEUM HYDROCARBONS POLYCHLORINATED BIPHENOL'S VOC VOLATILE ORGANIC COMPOUNDS NON - PRIORITY PARTS PER MILLON ACID EXTRACTABLES BASE NEUTRALS EXISTING BUILDING FENCE CONCRETE CENTER LINE PROPERTY LINE Estim. CONCRETE SAMPLES RE-EXTRACTED AS SPECIFIED IN 40 CFR PART BE UNDERGROUND STORAGE TANK - SOIL SAMPLE (USEPA) 1984 WASTE WATER / SLUDGE (USEPA) 1984

NOTE :

ANALYTICAL DATA MANIFESTED ON THIS DRAWING COLLECTED FROM REPORTS PRODUCED BY; DAN RAVIV ASSOCIATES INC., 5 CENTRAL AVENUE, WEST ORANGE, NEW JERSEY, JULY 17, 1986; LOUIS BERGER & ASSOCIATES INC., 100 HALSTED STREET, EAST ORANGE, NEW JERSEY, DECEMBER 1986. LOCATIONS ARE APPROXIMATE.







DRAFT

REMEDIAL INVESTIGATION WORK PLAN FOR THE BAYONNE BARREL AND DRUM SITE

Submitted to:

New Jersey Department of Environmental Protection
Bureau of State Case Management
Division of Hazardous Waste Management
401 E. State Street - Fifth Floor
CN 028
Trenton, NJ 08625-0028

Attention: David Sweeney, Section Chief

Submitted by:

P.A.P. Living Trust 333 Wacker Drive Chicago, Illinois

Prepared by:

SMC Environmental Services Group, Inc. Valley Forge, Pennsylvania

January 15, 1991

Ref: 9731-90000

BBA000052

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2.0 SITE HISTORY

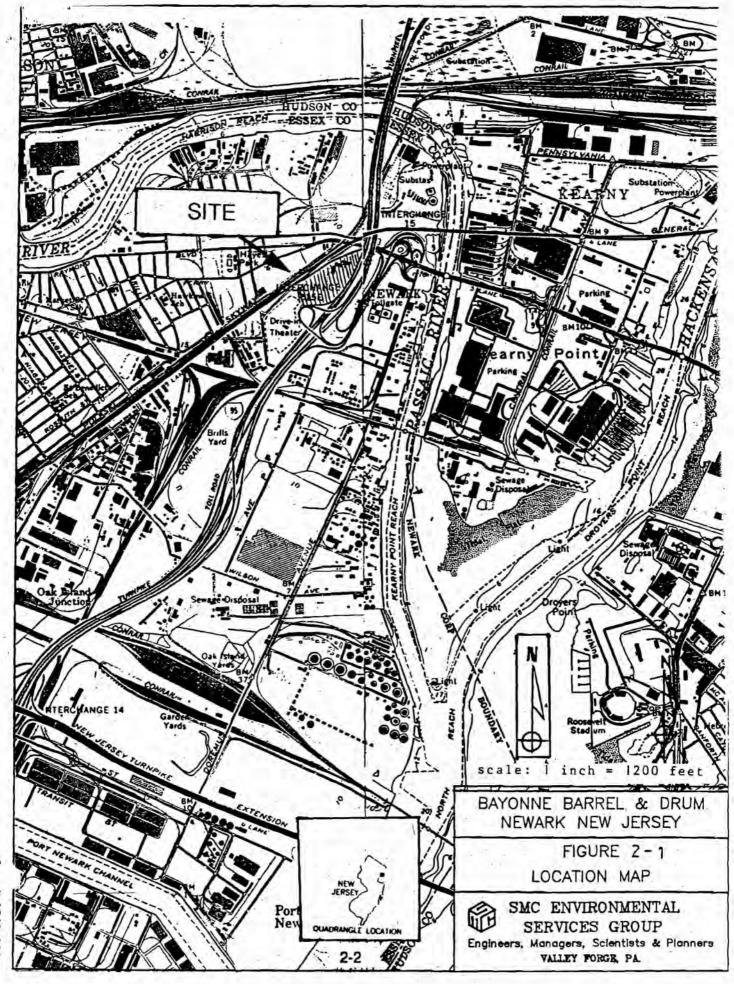
The Bayonne Barrel and Drum Company (BBD) site is located in northern New Jersey at 154 Raymond Boulevard in Newark, Essex County, New Jersey (Figure 2-1). It is situated between the New Jersey Turnpike to the east, New Jersey Highway 25 (Pulaski Skyway) to the west, and the abandoned Newark Drive-In to the south. The site, as defined in the ACO, consists of property designated as Block 5002, Lots 3 and 14 on the City of Newark municipal tax maps. These two lots include an approximately 9-acre tract owned by Bayonne Barrel and Drum Company and an approximately 5.5-acre tract owned by Frank Langella, a principal of the Bayonne Barrel and Drum Company (Figure 2-2).

In addition to the site, the Bayonne Barrel and Drum study area includes approximately 2 acres of right-of-way owned by the New Jersey Turnpike Authority (NJTA). The NJTA right-of-way includes land previously owned or used by Bayonne Barrel and Drum Company and/or land which is situated topographically downgradient from the site (Figure 2-2) and is included in the study area to evaluate potential for contamination emanating from the site.

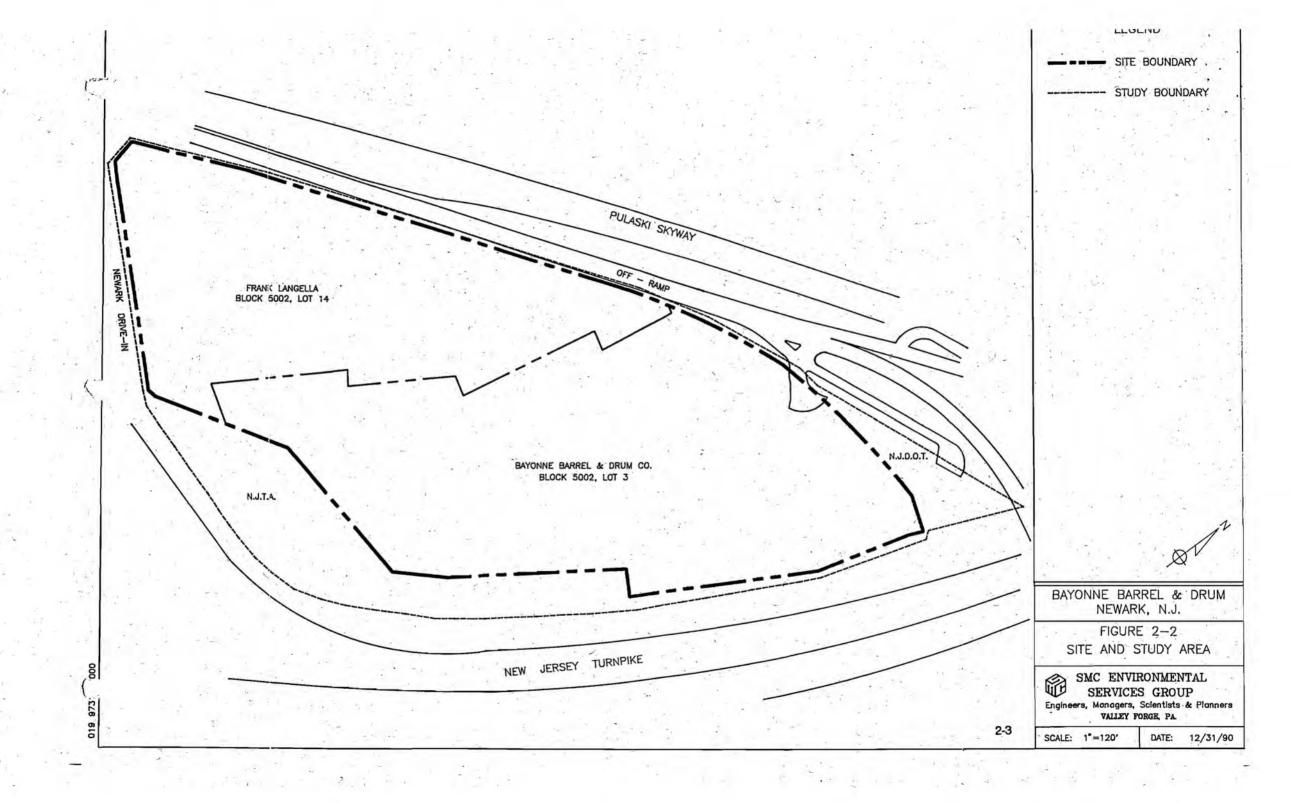
As currently configured, nine (9) buildings exist at the site (Figure 2-3). These buildings are listed in Table 2-1. In addition to the buildings listed in Table 2-1, additional structures at the site include: a water separator trench; a 5,000 gallon underground wastewater settling tank; a 60,000 gallon above-ground tank utilized for settling water prior to discharge to the sewer; four (4) underground tanks near Building No. 8; two (2) underground collection tanks at the end of the furnace; and a collection/separator trench located adjacent to the furnace. Two (2) additional above-ground storage tanks, which were reportedly never put into service, are located in the wastewater settling tank area.

2.1 Operational and Ownership History

Bayonne Barrel and Drum Company and a predecessor company, Export Barrel Company, have occupied portions or all of the site for nearly sixty (60) years. During that period, the facility has expanded its areal coverage and number of buildings, and it has altered the location and extent of its waste management activities. Although many of the changes were not recorded, contemporaneously, this site history has been prepared from information available in previous reports (see Section 2.14) and findings of fact and from information provided by the current owner of Bayonne Barrel and Drum Company, Mr. Frank Langella.



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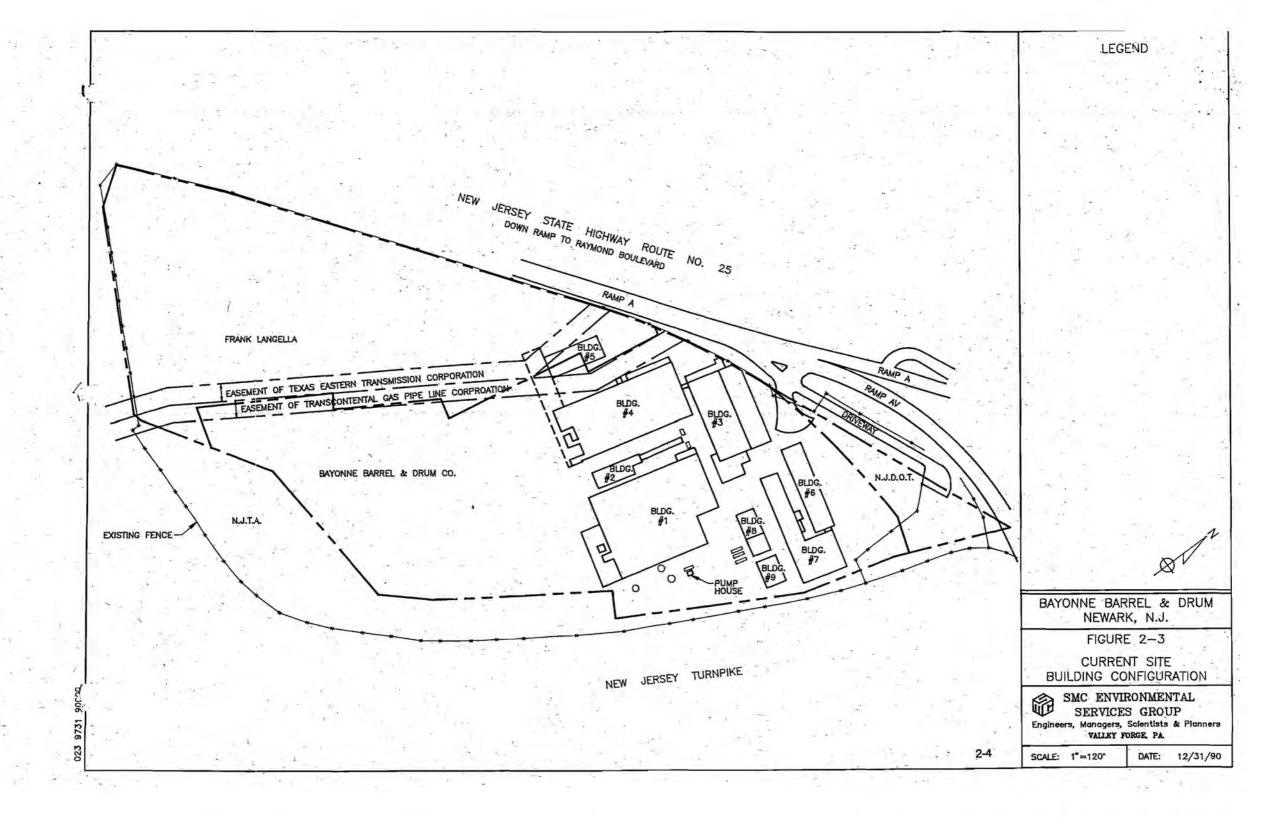


TABLE 2-1

BUILDINGS AND STRUCTURES

BAYONNE BARREL AND DRUM SITE NEWARK, NEW JERSEY

Building Number		Floor Area (sq. ft.)	Description
	1	29,000	Concrete block building used for reconditioning of closed head drums, and for shot blasting open and closed head drums
	2	2,250	Drum staging building for preparation for the furnace
	and	760	Furnace for the cleaning of drums
	3	14,000	Concrete and brick building used to receive open head drums immediately after cleaning in the furnace
	4	20,000	Transite and steel building used for the reconditioning of open head drums
	5	4,000	Paint storage building
	6	5,400	Office building
ý	7	9,300	Machine shop and maintenance garage
	8	2,400	Boiler House
	9	1,750	Service Building

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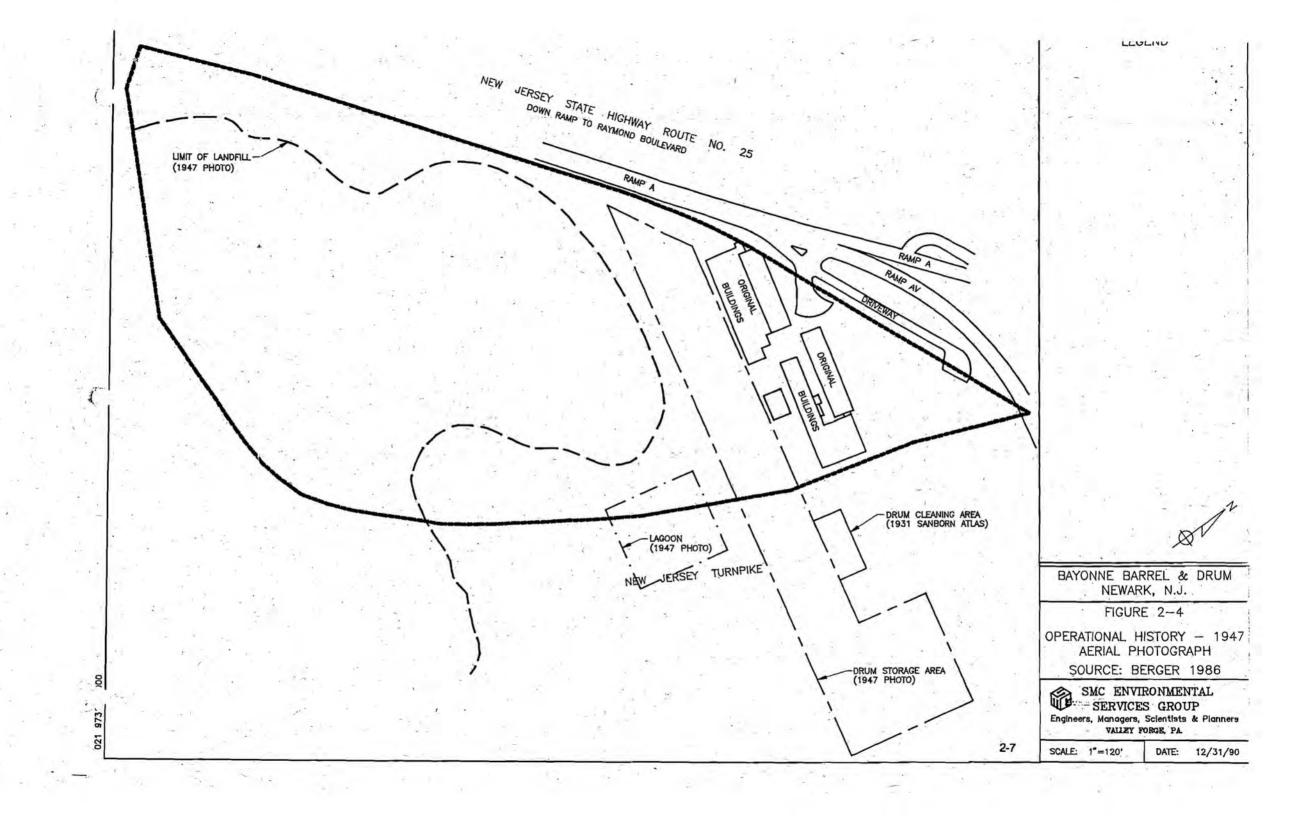
James Y

The original use of the property and buildings is not known. The land on which these buildings were constructed was filled probably prior to 1931, and according to Mr. Langella, these buildings may have been occupied by a leather tannery (Diversified Environmental Resources, Inc. "RCRA Closure Plan," page 12, January 1990). Since aerial photographs of the property reveal the presence of drums as early as 1934, it is assumed that Export Barrel Company began operations on the northern portion of the site sometime prior to 1934.

In approximately 1940, Bayonne Steel Drum Company merged with Export Barrel Company to form the Bayonne Barrel and Drum Company. At the time of the merger, the newly formed company owned three acres of property at the northern end and extending about 250 feet east of the site (Diversified Environmental Resources, Inc. "RCRA Closure Plan," page 12, January 1990). Situated on this property and within the site were three buildings (Building No. 3, Building No. 6/7, and probably Building No. 8). The original owners of the merged company were Mr. Frank Langella and Mr. David Pacrulli (Louis Berger & Associates, page 6, December 1986).

Bayonne Barrel and Drum Company operated a drum reconditioning operation on the three-acre property throughout the 1940s. A 1947 aerial photograph of the property described by Louis Berger & Associates in a December 1986 report, showed that the company's operations were limited primarily to the three-acre property bounded by NJ Highway 1 & 9 to the north and west, bounded by wetlands then owned by the Episcopal Diocese of the City of Newark to the south, and bounded by Harrison Creek to the east. Based on the photograph, Berger (1986) indicated that drums were stored on the southern and eastern portions of the three-acre property. The 1947 photograph also showed a lagoon to be located south of the three-acre property on or near property owned by the Episcopal Diocese of the City of Newark (Berger, 1986) (Figure 2-4).

In about 1950, Mr. Langella bought out Mr. Pacrulli, and Bayonne Barrel and Drum Company acquired from the Episcopal Diocese of the City of Newark approximately four (4) acres of land immediately south of the original property (Deposition upon Oral Examination of Frank A. Langella dated June 27, 1988). The eastern portion of this property consisted primarily of wetlands, and active landfilling operations existed on the western portion of the property at the time of purchase. According to Mr. Langella, Bayonne Barrel and Drum Company hired McCaffery Contracting Company of Newark, New Jersey, to fill the wetlands to the existing grade in the western portion of the Diocese property. McCaffery reportedly filled the area with bottom ash obtained from a Public Service Electric & Gas Company electric power generating plant (Diversified Environmental Resources, Inc. "RCRA Closure Plan," page 18, January 1990).



During the early 1950s, the NJTA condemned several acres of the Bayonne Barrel & Drum Company property for the purpose of constructing a portion of the New Jersey Turnpike. This "first taking" of property for the Turnpike included land upon which the company had stored drums prior to reconditioning (Figure 2-5). This portion of the property was subsequently filled by NJTA with materials of unknown source and quality for the construction of the Turnpike, and NJTA realigned Harrison Creek (Diversified Environmental Resources, Inc. "RCRA Closure Plan," page 13, January 1990).

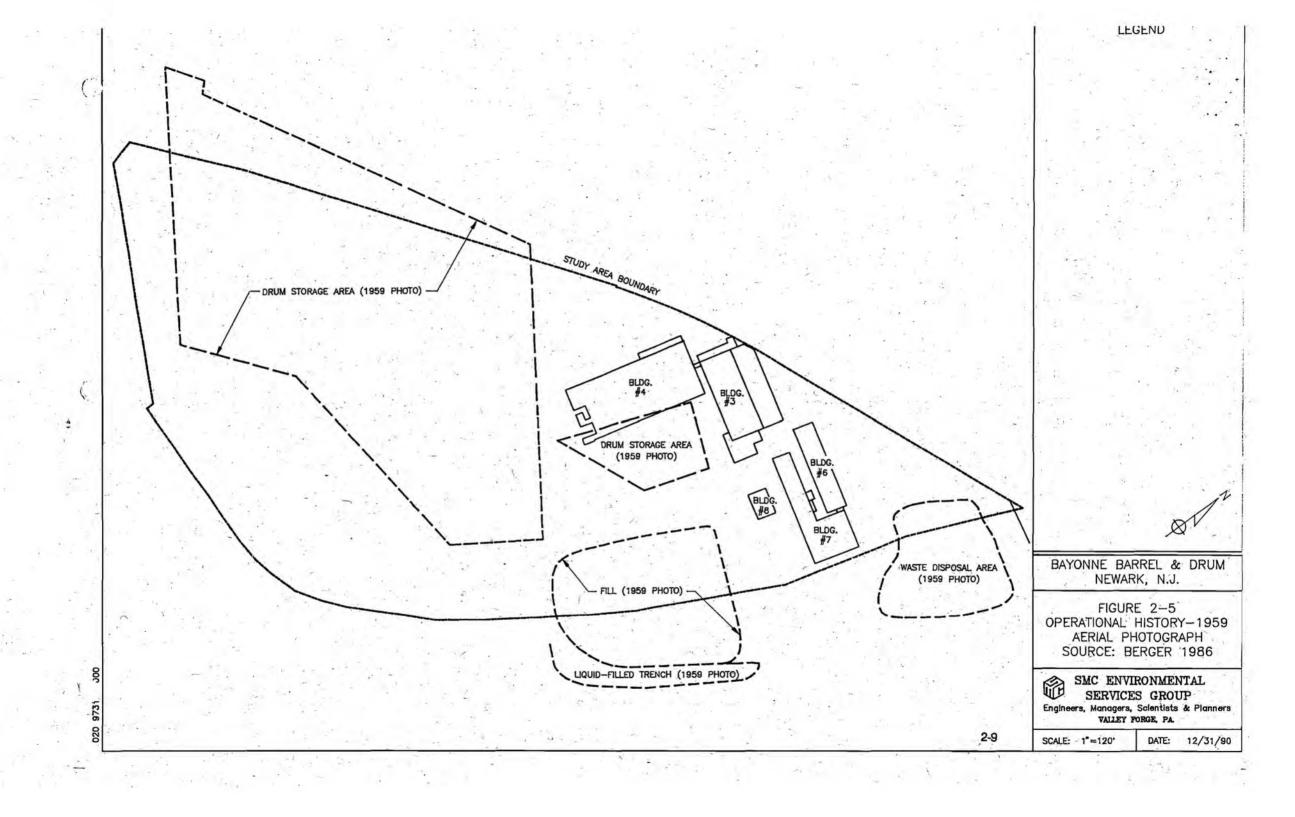
According to Mr. Langella Bayonne Barrel and Drum Company and the NJTA subsequently negotiated an agreement through which NJTA granted title to additional land adjacent to company land (Deposition Upon Oral Examination of Frank A. Langella, dated June 27, 1988). Some of the land acquired from NJTA included property previously operated by the City of Newark as what is currently referred to as a "15E Sanitary Landfill" (Diversified Environmental Resources, Inc. "RCRA Closure Plan," page 17, January 1990).

The Bayonne Barrel and Drum Company-owned portion of the site, therefore, consists of the original three acre parcel with the additions of property from the Episcopal Diocese of Newark and from the NJTA and the loss of property condemned by NJTA.

In the mid 1950s, Mr. Langella personally acquired 5.5 acres of property from a Mr. Yeskel. This property was leased to Bayonne Barrel and Drum Company and comprises the southwestern portion of the BBD site and study area. Prior to its purchase by Mr. Langella, nearly all of the property was operated by the City of Newark as what is currently referred to as a "15E Sanitary Landfill" (Diversified Environmental Resources, Inc. "RCRA Closure Plan," page 13, January 1990).

During the 1950s, Bayonne Barrel and Drum Company constructed a 20,000 square foot transite and steel building used for the reconditioning of open head drums (Building No. 4) (Figure 2-5). In the 1960s, the company constructed a 29,000 square foot concrete block building which was used for the reconditioning of closed head drums and the shot-blasting of both open- and closed-head drums (Building No. 1). Both of these buildings were constructed on land previously used for drum storage, and extended into the area previously used for the City of Newark "15E Sanitary Landfill." The company also constructed a 4,000 square foot building for paint storage (Building No. 5) and a loading platform connecting Building No. 4 and Building No. 5, which were partially or totally within the limits of the "15E Sanitary Landfill" (Louis Berger & Associates, December 1986).

As a result of the construction of Building Nos. 1 and 4 in areas formerly used for drum storage, aerial photographs show that the drum storage area was shifted



further to the south on both the Bayonne Barrel and Drum Company property and the Langella property to areas previously used by the City of Newark for its "15E Sanitary Landfill." The drums were placed on fill consisting of bottom ash (Diversified Environmental Resources, Inc. "RCRA Closure Plan, page 13, January 1990.

In approximately 1967, the NJTA condemned a section of the eastern portion of the existing Bayonne Barrel and Drum Company property for the purpose of constructing an expansion to the New Jersey Turnpike. Based on a review of 1967, 1968 and 1969 aerial photographs, this "second taking" appears to have resulted in the razing of buildings which had been used for drum reconditioning operations, and the filling of a waste disposal area located north and east of the original building.

Based on a review of aerial photographs from 1950 and 1967, it appears that sometime between the first (1950) and second (1967) taking by the NJTA, the wastewater lagoon, located on or near what was the Diocese property (Figure 2-4), was filled. Berger (1986), in a review of a 1959 aerial photograph, noted that the lagoon was filled before 1959, and that the eastern and southern boundaries of this filled lagoon were bounded by a 20 to 50 foot wide trench. Aerial photographs show that the trench and most of the area of the filled lagoon were within the second taking by NJTA and were covered during the construction of what are now the southbound lanes of the Turnpike.

In 1982, Bayonne Barrel and Drum Company filed for protection from creditors under Chapter 11 of the Bankruptcy Code. Operations at the BBD site came to a close around 1983. Several tenants have utilized the property between 1983 and 1990 for a variety of businesses (Deposition Upon Oral Examination of Frank A. Langella dated June 27, 1988). PAP purchased the mortgage from the bank in approximately 1985.

2.2 Raw Materials Used

The BBD facility reconditioned and recycled used drums for resale and reuse. No other products are reported to have been manufactured at the facility. The raw materials utilized in the drum reconditioning operation included "empty" drums, detergents, caustic cleaning solutions, solvent based cleaning solutions, solvent based paints, and thinners.

The drums cleaned included DOT Specification Containers such as 17 H open head drums, 17E closed head drums and specialized drums including Military Specification jet fuel containers. The sources of these drums included food and cosmetics, petrochemicals (paints, solvents etc.), herbicides and pesticides, military, and solid and hazardous waste facilities.

2.3 Disposal Practices and Pollution Sources

BBD generated wastes from several sources. Liquid wastes were generated from both the caustic cleaning operations and from the drum quenching operations associated with the furnace operations. Solid wastes were generated from the initial cleaning of open head drums and from the cleaning of open head drums in the furnace (Hazardous Waste Inspection Report, dated February 22, 1982 by Tom Downey, NJDEP, Solid Waste Administration).

From 1940 to about 1949, liquid waste appears to have been disposed of in the lagoon on the eastern side of the property (1950 Aerial photographs and Louis Berger & Associates, page 6, 1986) (Figure 2-4).

After the removal of the lagoon, liquid waste was directed from various locations in the process to a 5,000 gallon receiver located to the east of Building No. 1. From the receiver, it was pumped to a 60,000 gallon settling tank. As stated in the November 20, 1990 ACO, the settling tank may have been connected to a six or eight inch Passaic Valley Sewer Authority (PVSA) sewer line located at Raymond Boulevard under the Pulaski Skyway (Industrial Sewer Connection Application by BBD dated November 28, 1977 and subsequent application dated June 9, 1980).

Solid wastes, in the form of sludge from the receiver and the settling tank and solids from the furnace operation, were removed by the S & W Waste, Inc. of South Kearney, New Jersey and transported to the Falls Township, Pennsylvania landfill site (Source: Process Description compiled by Eugene H. Koenig, P.E., as a consulting engineer, along with George Shaneen from BBD and reviewed and initialled by Frank Langella, President of BBD, undated). Immediately before cessation of operations, some ash material was piled on the southwest portion of the site.

2.4 Historic Site Plans

Figure 2-3 shows the site as it is currently configured. This figure is transcribed directly from a site plan included in the Diversified Environmental Resources, Inc. "RCRA Closure Plan" dated January 1990. This site plan indicates that data for meets and bounds, existing structures and properties were compiled from a drawing by Borrie, McDonald & Watson, Surveyors dated February 29, 1972.

Figures 2-4 and 2-5 indicate site features identified from aerial photographs taken in 1947 and 1959. These figures are discussed in Section 2.1.

2.5 Aerial Photographs

The previous study by Berger (December 1986) included a review of aerial photographs from 1947, 1959 and 1985. Figure 2-4 indicates key site features identified from the 1947 photograph, and Figure 2-5 indicates key site features identified from the 1959 photograph. These photographs were not available at the time this RI Work Plan was prepared.

Photographs of the site and study area which were available for the preparation of this RI Work Plan included the following:

- An aerial photograph by Fairchild Aerial Surveys, Inc. with a marking pen notation of "1950?"
- June 26, 1967 (AeroService Corporation Photograph Number 67-26)
- o March 26, 1968 (AeroService Corporation Photograph Number 68-33)
- o April 6, 1968 (AeroService Corporation Photograph Number 68-34)
- September 8, 1968 (No Name or Number).
- o January 1, 1969 (AeroService Corporation Photograph Number 49775)
- o June 4, 1969 (AeroService Corporation Number 49861)

Photo-reproductions of several of these photographs are included in Appendix I as indicated exhibits as follows:

- o Fairchild Aerial Surveys, Inc. "1950?" (Exhibit I-1)
- June 26, 1967 AeroService Corporation Photograph Number 67-26 (Exhibit I-2)
- March 26, 1968 AeroService Corporation Photograph Number 68-34 (Exhibit I-3)
- o January 1, 1969 AeroService Photograph Number 49775 (Exhibit I-4)

Exhibit I-1 is a photograph which looks south and shows the study area and site in about 1950 near the time of the "first taking" by the NJTA. The picture shows additional buildings attached to and extending east from original Building No. 7 in the area later acquired by the NJTA during the "second taking." Drums are stacked to the

north of these additional buildings and to the south of the original and new buildings across the property from west to east. To the south of the drums, in the approximate area of the Diocese parcel, is located the wastewater lagoon. To the west of the lagoon is a leveled area with approximately 22 drums in a row. To the south of this area, in the area of the 15E Sanitary Landfill, the land is heavily disturbed with piles of dumped soil or similar material located in the western half.

Exhibit I-2 is a photograph which looks north and shows the study area and site on June 26, 1967. The picture shows that additional buildings (Building Nos. 2 and 4) have been added to the south of Building No. 3 an area used for drum storage in the 1950 photograph. The photograph also shows that the wastewater lagoon has been filled and the area converted to drum storage. Adjacent to this former lagoon is a above-ground storage tank and ancillary structures. Drums are also stored to the south of Building Nos. 2 and 4 in the 15E Sanitary Landfill area. South of the drum storage area is an area of light colored soil. Between the light colored soil and a fenceline is a small cluster of about 40 drums. North of the original buildings, land used for drum storage in 1950 has been cleared of drums and carries vehicular traffic into the facility. North of this area toward Raymond Boulevard is parking and light colored soil adjacent to the turnpike. The New Jersey Turnpike runs along the "first taking" alignment.

Exhibit I-3 is a photograph which looks south and shows the study area and site on March 26, 1968. The photograph shows that Building No. 5 and the loading platform connecting Building No. 4 and Building No. 5 have been constructed. The filled lagoon area has been cleared of drums. The above-ground storage tank adjacent to the former lagoon area is still present, however, the one of the ancillary structures has been removed. Drums are no longer stored to the east of Building No. 4, but it appears that drum storage has been extended southward from the furnace (Building No. 2). The drum storage area south of the buildings has been shifted further southward to the fenceline. North of the original buildings, in the area of the NJTA "second taking," soil, vegetation and parking area had been removed and grading was occurring at the time of the photograph.

Exhibit I-4 is a photograph which looks south and shows the study area and site on June 4, 1969. The photograph shows that Building No. 1 has been constructed and that the buildings to the east of the original Building No. 6&7 have been partly or totally removed. In addition, a small structure has been constructed next to the boiler (Building No. 8). A second, smaller above-ground storage tank is shown adjacent to the first storage tank. Drums are stack in this area, which is southeast of Building No. 1. Construction activities in the NJTA "second taking" area are underway at the time of the photograph.

Here are a new of drains along the NJTA love ex

2.6 Site Water Budget

An annual water budget for the site has been developed for conditions currently existing. The site is effectively isolated by the New Jersey Turnpike and the Pulaski Skyway. Surface runoff from the northern three-quarters of the site and study area is prevented from leaving the area by the New Jersey Turnpike and the Pulaski Skyway although some stormwater can leave the site and flow north onto NJDOT property along the exit ramp from the Pulaski Skyway. Runoff from these highways does not enter the site. Surface runoff from the southern and eastern portions of the site potentially could flow into a stormwater drainage feature on NJTA property; however, the southern portion of the site is flat and contains permeable material, so surface runoff from this area is probably a small percentage (~10%) of precipitation.

The annual water budget for the site includes precipitation, surface runoff, infiltration, and evaporation. Annual average precipitation for Newark, New Jersey is about 48 inches (National Oceanic and Atmospheric Administration, "Climates of the United States," 1973). Annual evaporation is assumed to be 33 inches, the shallow lakes evaporation rate (US National Weather Service In: Hydrology for Engineers, Linsley, Kohler and Paulhus 1975). Based on the assumption that surface runoff is ten (10) percent of annual precipitation or about five (5) inches, the difference between precipitation input and output os evaporation on a surface runoff is 10 inches. This amount is assumed to infiltrate into the ground.

2.7 Surrounding Community

The area immediately surrounding the site consists of highway corridors and industry. Industrial facilities in the surrounding community include refineries, landfills, reclamation centers, chemical storage and waste conversion facilities. The nearest residential community is located west of the Pulaski Skyway approximately one-half mile from the site.

2.8 Previous ECRA Submissions

There are no known previous ECRA Submissions for this site.

2.9 Permits

A one-day review of files available at the site did not reveal environmental permits issued for operations at the BBD facility. Applications to the Passaic Valley Sewer Commission (PVSC) for sewer discharge were found for the years 1977 and 1980, and Mr. Langella has indicated that a permit has been issued by PVSC. A telephone request was made to PVSC for a copy of the permit, but it was not forthcoming.

A New Jersey Pollution Discharge Elimination System (NJPDES) Discharge to Ground Water (DGW) permit was issued to BBD for the "15E Sanitary Landfill," part of which is located within the site. The permit is for a non-point discharge to ground water. The actual permit was not located during review of available files; however, letters transmitting inspection reports for the area indicate an NJDPES Permit No. NJ0064068.

2.10 Violations

On or about May 20, 1982, the United States Environmental Protection Agency (USEPA) issued to the Bayonne Barrel and Drum Company an administrative complaint pertaining to various violations of the Resource Conservation and Recovery Act (RCRA).

On September 3, 1984, the USEPA and Bayonne Barrel and Drum Company executed an Administrative Consent Order and Agreement (ACO) under which Bayonne Barrel and Drum Company was ordered and agreed to take various steps to comply with RCRA. These steps included: remove waste ash piles and soils contaminated thereby, submit a RCRA closure plan by December 2, 1984 to NJDEP, establish financial assurance for closure of the facility, and remove liquid and sludge from the above-ground storage tanks.

In 1987, the US Department of Justice (USDOJ) filed a suit against BBD and Mr. Langella for various violations of RCRA and for failure to comply with the terms of the 1984 USEPA Consent Order and Agreement. The violations cited by the USEPA included storage of hazardous waste ash without a hazardous waste permit and failure to remove the waste ash pile or to take steps to minimize the possibility of release of constituents from the waste ash into the environment.

Over the next two years, information gathered through discovery confirmed the validity of the USDOJ suit, and on May 3, 1989, BBD and Mr. Langella stipulated to liability on every count charged in the 1987 USDOJ complaint. On October 30, 1989, a USDOJ motion for summary judgement as to the appropriate injunctive relief in the matter was served on attorneys for BBD and Mr. Langella.

On December 12, 1989, the U.S. District Court (District of New Jersey) ordered that BBD and Mr. Langella do the following: remove and properly dispose of waste ash piles; take steps to minimize possibility of releases to the environment; establish financial assurance for closure; submit to NJDEP and implement a closure plan that addresses remediation of all contamination at the facility; and cease illegal storage of hazardous waste and PCBs at the facility.

The closure plan, prepared by Diversified Environmental Resources, Inc., was submitted to NJDEP, as required by the court order, on January 4, 1990. NJDEP indicated that prior to reviewing the plan, they would need to execute an administrative consent order.

On November 20, 1990, the P.A.P. Living Trust (PAP) signed an Administrative Consent Order (ACO) issued by the New Jersey Department of Environmental Protection (NJDEP) pursuant to the NJ Water Pollution Control Act, the NJ Solid Waste Management Act, and the NJ Spill Compensation and Control Act. PAP signed the order to facilitate its plans to purchase and develop the BBD site under a trust agreement.

2.11 Hazardous Waste Containers

The BBD facility handled a variety of materials which might currently be considered to include both hazardous wastes and hazardous substances. These may have been placed in containers, tanks, surface impoundments, and other units. Landfilling took place at the BBD site prior to BBD acquisition of the property. Some fill material was placed to level the ground surface after BBD acquired the property. The units identified as potentially containing and/or previously containing what may now be considered to be hazardous substances/wastes include the following:

- BBD received, stored and reconditioned "empty" containers (drums) as its primary business.
- Incidental to the reconditioning of the "empty" containers, BBD utilized hazardous substances in additional containers.
- Tanks (both above and below ground) were used by BBD for the storage of virgin substances, currently listed as hazardous, and for the treatment of wastes.
- A surface impoundment was also utilized on-site by BBD during the 1940s and early 1950s for the management of wastes generated on-site.
- A landfill was operated over most of the property which currently comprises the BBD site and additional fill material was placed over this landfill and at other locations on the site.
- At least one (1) furnace was operated at the facility for the reconditioning of "empty" drums.
- Open troughs, including an oil/water separator were located on site.

Each of these units is described in the following subsections.

2.11.1 Containers

BBD received stored and reconditioned "empty" containers (drums). As many as 250,000 containers were stored at the facility at any one time. Each of these containers was a potential source of environmental contamination from spillage of the residues in the containers. The actual contents of the "empty" containers was not documented during the operation of the facility. However, based on the nature of the operations and a review of the "empty" containers presently on-site, it is assumed that BBD may have accepted containers which previously held virtually any material (including hazardous substances). As documented by the aerial photographs of the facility, "empty" containers were stored and/or managed throughout the site. The primary storage area for containers awaiting reconditioning was located in the southern half of the property. Containers which may have contained hazardous substances were also handled in the furnace area and the closed head reconditioning building.

The BBD facility also handled virgin products in containers. These products included solvent based paints and thinners which were stored in Building 5 and used in Buildings 1 and 4. Caustic and detergent solutions associated with the closed head cleaning operation were also stored and used at the facility. Other containerized materials, such as lubricating oils, were probably also handled throughout the facility.

2.11.2 Tanks

BBD used above ground storage tanks (ASTs) and underground storage tanks (USTs) for the treatment of wastes generated at the facility. These tanks are described in Section 2.3. BBD also used USTs for the storage of virgin materials which are defined as hazardous substances. The USTs are located on the southern side of Building 8 and are described in Section 2.12.

2.11.3 Surface Impoundments

One surface impoundment previously existing at the BBD facility. It is described in Section 2.3.

2.11.4 Landfills

The vast majority of the BBD facility is comprised of landfill and filled land. Aerial photographs document the landfilling of the southern portion of the site during the late 1930s and early 1940s as part of the operation of a landfill known as the "15E Landfill". Additional activities, including the placement of fill material, documented at the site, include the filling of approximately four acres of land with bottom ash probably generated by a Public Service Electric and Gas coal fired power plant, the filling of the surface impoundment and the filling of the eastern portion of the property during construction of the New Jersey Turnpike. It is further believed that the original buildings were built on land adjacent to Raymond Boulevard which was also altered by the placement of fill materials.

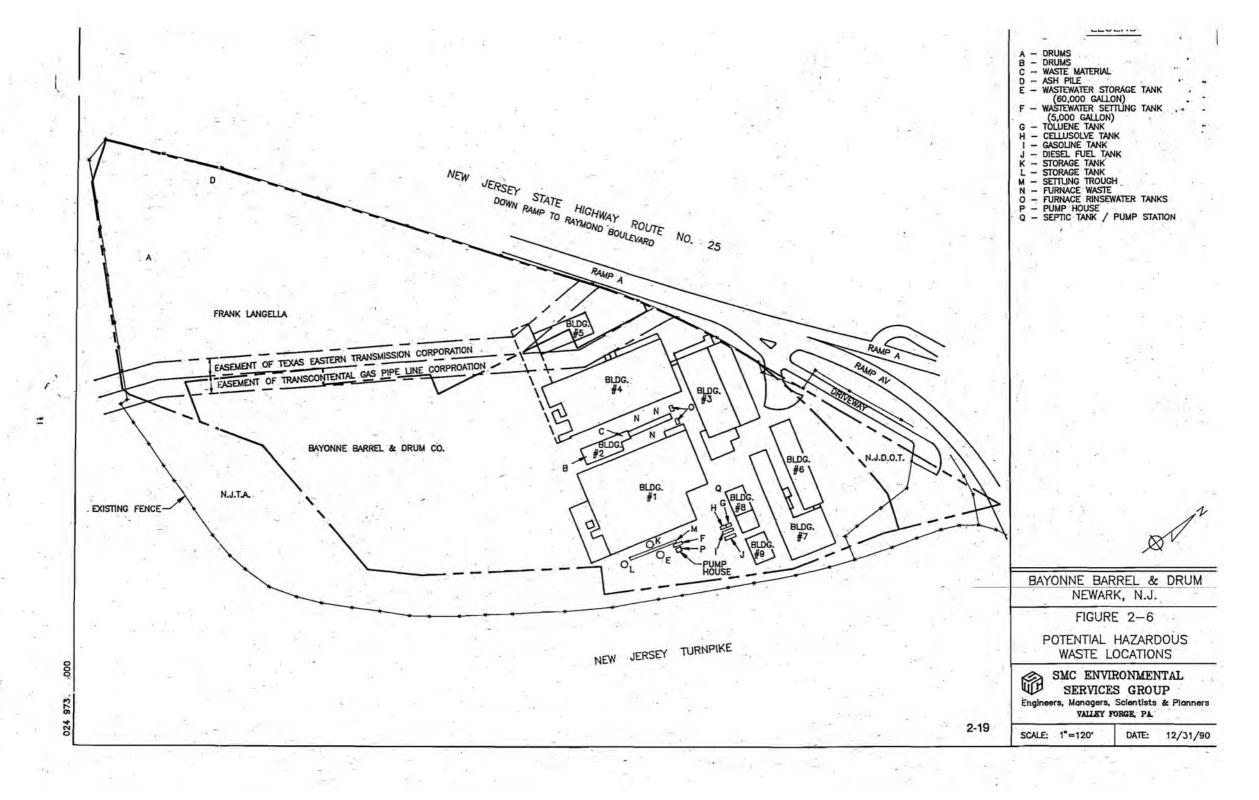
2.11.5 Other Units

Other units identified at BBD as containing or having previously contained hazardous wastes or substances include: the furnace and associated equipment; the quench tanks and troughs associated with the furnace operation; the closed head reconditioning equipment; and the troughs associated with the closed head reconditioning process. All of the closed head reconditioning equipment has been removed from the site. The remaining equipment is listed in Section 2.12.

2.12 Current Hazardous Waste Inventory

Currently, there are several locations on-site which do or may contain hazardous waste. Their location is indicated on Figure 2-6 and described as follows.

- A. Drums Approximately 45,000 drums are stacked on their sides in three (3) rows on the southern portion of the property. The drums are both open- and close-head drums. Some of the drums are steel encased plastic drums. Cursory examination of the drums and information provided by Mr. Langella indicates that most of the drums are empty.
- B. Drums Approximately 220 drums are stored upright in the furnace room (Building No. 2). It is understood that these drums contain waste associated with building decommissioning and are awaiting characterization prior to appropriate disposal. The characterization of these drums for disposal is not included in this RI Work Plan.



- C. Waste Material Approximately 20 cubic yards of material associated with decommissioning of the building is stored in the furnace room (Building No. 2).
- D. Ash Pile Ash from the open head drum furnace operation is stored near the drum stacks on the southwestern portion of the site. The material is being removed under a USEPA consent order.
- E. Wastewater Storage Tank A 60,000 gallon above-ground wastewater storage tank is located near the eastern side of Building No. 1. The volume and characteristics of the tank's current contents are unknown.
- F. Wastewater Settling Tank A 5,000 gallon underground wastewater settling tank is located near the eastern side of Building No. 1. The volume and characteristics of the tank's current contents are unknown.
- G. Toluene Tank An underground storage tank of undetermined volume is located near the southern side of Building No. 8. At one time, the tank contained toluene. The volume of the tank's current contents are unknown.
- H. Cellusolve Acetate Tank An underground storage tank of undetermined volume is located near the southern side of Building No. 8. The tank contained approximately 8.5 feet of liquid in December 1990.
- Gasoline Tank An underground storage tank of undetermined volume is located near the southern side of Building No. 8. The tank contained approximately 9 inches of liquid in December 1990.
- J. Diesel Fuel Tank An underground storage tank of undetermined volume is located near the southern side of Building No. 8. The tank contained approximately 7 inches of liquid in December 1990.
- K. Storage Tank An aboveground tank of undetermined volume is located immediately adjacent to the eastern side of Building No. 1. The volume and characteristics of the tank's current contents are unknown.
- L. Storage Tank An aboveground tank of undetermined volume is located near the southeastern corner of Building No. 1. The volume and characteristics of the tank's current contents are unknown.
- M. Settling Trough A concrete settling trough which is connected to the wastewater settling tank (F), is located near the eastern side of Building

- No. 1. The volume and characteristics of the trough's current contents are unknown.
- N. Furnace Waste A layer of undetermined depth of congealed waste material from operation of the furnace exists near the furnace discharge.
- O. Furnace Rinsewater Tanks Two (2) underground rinsewater storage tanks of undetermined volume collected rinsewater from the furnace cooling section. The volume and characteristics of the tank's current contents are unknown. These tanks discharged to the settling trough near the eastern edge of Building No. 1.
- P. Pump House The base of the pump house situated above the wastewater settling tank (F) east of Building No. 1 contains liquid whose volume and characteristics are currently unknown.
- Q. Septic Tank/Pump Station A wastewater tank and pump station is located near the southwest corner of Building No. 8. The volume and characteristics of its contents are unknown.

2.13 Historic Discharges of Hazardous Waste

In 1980, an inspection by NJDEP revealed rinsewater from the furnace was spilling directly onto the ground, plant drain lines containing process and sanitary wastewaters were overflowing, and the truck washdown area's soils were saturated with oils. Also in 1980, a inspection by Passaic Valley Sewage Commission (PVSC) revealed a discharge to the sewer of wastes with a pH of 1.5.

In February 1982, a RCRA compliance inspection found the 5000 gallon settling tank was overflowing and discharging directly into a storm sewer.

In April 1982, A RCRA compliance inspection noted extensive soil contamination around the furnace and the presence of a waste ash pile with dimensions of 30 feet by 40 feet by 2 feet.

2.14 Previous Environmental Examinations

The following is a list of the known environmental examinations conducted at BBD:

- A RCRA closure plan for the site was completed in 1990.
- An evaluation of the site was conducted by Raviv Associates in 1985.

- An evaluation of the site was conducted by Berger Associates for the NJTA in 1985.
- An evaluation of the site was conducted by EPA in 1984.
- Various inspections in 1980, 1981 and 1982 by the USEPA, NJDEP and PVSC.

A list of reports prepared as a result of these investigations is provided in Table 2-2.

2.15 Summary of Existing Data

Based upon the site ownership, operational history of the site and study area, and environmental examinations listed in Section 2.14, it is apparent that at least three operations may have impacted the site since some time prior to 1935. Much of the site is located on property once used by the City of Newark for what is now designated as a "15E Sanitary Landfill." Portions of the study area adjacent to the site have been acquired by the New Jersey Turnpike Authority (NJTA) and the New Jersey Department of Transportation (NJDOT) for highway right-of-way. These areas have been subject to placement of fill from unknown sources by the NJTA and NJDOT and unknown others.

The entire site has been owned by Bayonne Barrel and Drum Company and Frank Langella since about 1950 and portions of the site have been owned by them since 1940. During the period of ownership, drums have been received and stored, reconditioned, and clean drums have been stored at the site. The locations of drum storage have been moved as operations at the site expanded or were altered.

Because operations and persons responsible for these operations have changed through the years, fill material and potential site contamination would have been introduced onto the land surface in distinct layers. Several of these distinct layers (lithologies) are believed to be present on site corresponding to operations of particular persons or organizations.

Existing information, available from previous environmental examinations of the study area, does not provide sufficient detail concerning the chemical nature of possible contamination nor does the information provide incite into the correlation of potential contamination with the vertically variable lithologies or horizontal distribution of activities on the site or study area.

TABLE 2-2

PREVIOUS ENVIRONMENTAL REPORTS

BAYONNE BARREL AND DRUM SITE NEWARK, NJ

- USEPA Region III Office of Emergency and Remdial Response, August 1984. Preliminary Site Assessment: Bayonne Barrel and Drum Company, Newark, New Jersey. Technical Assistance Team, TDD #2-8407-25.
- Louis Berger and Associates, Inc., December 1986. Results of Preliminary Investigations and Sampling in Proposed New Jersey Turnpike Right-of-Way at the Bayonne Barrel and Drum Property, Newark, New Jersey.
- Louis Berger and Associates, Inc., December 1986. Preliminary Site
 Investigations New Jersey Turnpike 1985-90 Widening from Passaic River to
 Milepost 105. Historical Survey of Possible Sources of Contamination within
 and adjacent to the Proposed Turnpike Right-of-Way.
- Dan Raviv Associates, Inc., April 18, 1986, updated July 1986. Soils and Ground Water Characterization Bayonne Barrel and Drum Company, Newark, New Jersey, Job No. 84C182.
- Wehren Engineering Corporation, October 1988. Summary Report of the Test Pit and Monitoring Well Investigation at the Newark Drive-In Site.
- Diversified Environmental Resources, Inc., and Environmental Risk Limited, Volumes I and II, January 1990. RCRA Closure Plan for Bayonne Barrel and Drum Company, Newark, New Jersey.

Report No.: 8003-05-5

Rev. No.: 0

Work Assignment No.: 019-2JZZ Contract No.: 68-W9-0051

September 30, 1992

Ms. Sandra Foose
Pre - Remedial Assistant WAM
Environmental Services Division
U.S. Environmental Protection Agency
Region II
Edison, NJ 08837

RE: Bayonne Drum & Barrel Company Site Inspection Prioritization Evaluation

Dear Ms. Foose:

The following is a summary of the Site Inspection Prioritization Evaluation for the Bayonne Drum & Barrel Company, (CERCLIS ID No. NJD009871401) located at 150 Raymond Boulevard, Newark, New Jersey.

General Description and Site History

The Bayonne Drum & Barrel Company is an inactive drum reconditioning facility. The property is bounded by Routes 1 and 9 on the west and north, the New Jersey Turnpike on the east, and the former Newark Drive-In Movie Theater on the South (Ref. No. 19, p. 2). The site covers approximately 15 acres and most of the site (9.3 acres) is owned by Bayonne Drum & Barrel Company while the remaining area (5.5 acres) is owned by Bayonne Drum & Barrel Company's principal owner Frank Langella. A small portion to the south of the site is owned by the New Jersey Turnpike Authority (Ref. No. 19, p. 2). The site contains a number of buildings, an incinerator, above-ground and underground storage tanks, tire piles, and a large empty drum storage area (Ref. No. 19, p. 3). The site is relatively flat with a slight slope to the northeast (Ref. No. 19, p. 75). Drainage follows this topography and empties into stormwater drains along the site's eastern border which eventually enters the Passaic River (Ref. No. 19, p. 5). The drum cleaning operations formerly involved both closed head and open head drums. In closed head cleaning, chains and a caustic solution were used to wash out previous material in the drums. Open head cleaning of the drums consisted of placing them on a conveyor belt which passed the drums through the incinerator where the inside residues were burned off. This residue was collected in two on-site subsurface holding/settling tanks (Ref. No. 19, p. 3). The facility was in operation from 1931 to 1982 (Ref. No. 19, p. 2). Bayonne Drum & Barrel Company is currently in bankruptcy and a portion of the property has been leased to a company that repairs and maintains trailers and cargo containers. During June 1988, waste ash and aqueous samples were collected by Dan Raviv Associates for the U. S. Environmental Protection Agency (EPA) from various locations on-site. The sample analytical results which were analyzed by the EPA laboratory and a sample location map is provided in the Site Inspection Review (Ref. No. 19, pp. 49-55, 56). The samples were analyzed for EP Toxicity (metals only), volatile and non-volatile organic analysis and polychlorinated biphenyls (PCBs). Analytical results of these samples indicate the presence of various volatiles, inorganic metals, polynuclear aromatic hydrocarbons (PAHs), and PCBs (Ref. No. 19, pp. 49-55).

Evaluation of Existing Information

Information in the site file for Bayonne Drum & Barrel Company was used to conduct the initial evaluation of the site. In February 1984, a Resource Conservation and Recovery Act (RCRA) sampling survey was conducted by the EPA. Sampling was conducted to determine compliance with a May 1982 complaint and compliance order. EPA took soil and aqueous samples from the area around the underground settling tank, the subsurface tank near the incinerator, and the oil/water separator trench. Ash samples were taken from the ash sludge pile at the rear of the property. Analytical results indicated inorganic metals, and total volatiles in the soil and ash samples. The soil samples also contained elevated levels of PCB's (Aroclors 1248 and 1254). There were elevated levels of semi-volatile organics detected in the aqueous waste samples

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(Ref. Nos. 8; 19, pp. 171-180). These samples were analyzed by the EPA Laboratory in Edison, NJ but the sampling report contained no information as to whether the data was subject to a Quality Assurance/Quality Control (QA/QC) review. From January 1985 to January 1986, Dan Raviv Associates conducted soil, surface water/sediment and groundwater sampling at the site. Analytical results indicated the presence of PCBs, total petroleum hydrocarbons and volatile organics (Ref. Nos. 18; 19, pp. 9, 10). The samples were analyzed by Gollob Analytical Laboratory in Berkeley Heights, NJ. The data was not subject to a formal QA/QC review. During April and May 1988, Louis Berger Associates conducted soil and groundwater sampling at the site. Analytical results indicated organic and inorganic contaminants in the soils and volatile and semivolatile organics in the groundwater samples. The analytical data was not subject to a QA/QC review by NJDEP but was reviewed by a QA coordinator for Louis Berger Associates (Ref. No. 19, pp. 9, 122-170). The analytical data from the waste ash and waste aqueous samples collected by EPA during the 1988 RCRA sampling was interpreted as indicating the presence of PCBs (Aroclors 1248 and 1254) and volatile and semi-volatile organics in various ash piles located around the property. Analytical results indicated elevated levels of various on-site contaminants but no adequate background samples were obtained during the sampling. The samples were analyzed by the EPA laboratory in Edison, NJ. The analytical data was subject to a QA review by EPA Region II personnel (Ref. No. 19, pp. 10-11, 43-66).

Hazard Assessment

Updated and additional information and data collected to further evaluate the site included groundwater population data, sensitive environment information, surface water flow rate, and 4-mile radius populations.

Groundwater Pathway - During the Dan Raviv Associates investigations, groundwater samples were obtained from the five on-site wells. During the 1988 RCRA sampling event there were no samples taken from the groundwater monitoring wells. The aquifer of concern in the area of the site is the Brunswick Formation (Ref. No. 15, p. 15). The depth to groundwater is three to four feet and groundwater flow direction is toward the east (Ref. No. 19, p. 4). The Brunswick formation is composed primarily of the soft red shale and red sandstone (Ref. No. 15, p. 13). In the Newark Area the aquifer is recharged by precipitation infiltration. There are no known potable supply wells within the suspected contamination boundary of the site. Groundwater within a four-mile radius of the site is not used as a drinking water source, as people receive their water from several reservoirs which are not located along the surface water pathway (Ref. Nos. 6, 7, 8, 9, 10, 11). The proximity of the site to a wellhead protection area cannot be determined, pending promulgation by the NJDEPE of protected areas which are not yet defined (Ref. No. 13).

Surface Water Pathway - During the 1988 RCRA sampling, no surface water/sediment samples were collected from the nearby surface water bodies. The nearest downslope surface water is the Passaic River (777 cfs) which is approximately 2,000 feet to the east. The Passaic River empties into Newark Bay (Ref. Nos. 5; 19, pp. 4, 5). The Passaic River is tidally influenced up to the Dundee Dam in Paterson (Ref. No. 14). In addition the river is used for industrial purposes and occasional recreational boating (Ref. No. 19, p. 5). There is a prohibition on the sale and consumption of all fish, shellfish or crustaceans from the Passaic River (Ref. No. 14). In addition, there is a prohibition on the sale or consumption of striped bass, blue crabs and the sale of American eels from the entire Newark Bay Complex (Ref. No. 14). Due to the tidal influence of the Passaic River, there are approximately 11 miles of wetland frontage found upstream and downstream of the site (Ref. No. 4). The nearest wetlands upstream is two miles and downstream is three-quarters of a mile, respectively, from the nearest probable point of entry. No analytical data are available to indicate that any fisheries or sensitive environments referred to above have been actually contaminated.

Ms. Sandra Foose U.S. Environmental Protection Agency September 30, 1992 - Page 3 Report No.: 8003-05-5

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Soil Exposure Pathway - During the 1988 RCRA sampling event no on-site soil samples were obtained but during the 1985 to 1986 Raviv soil sampling volatile organic, total petroleum hydrocarbons and inorganic metals were detected at various locations on-site (Ref. Nos. 18; 19, pp. 76-78). Analytical results of the ash samples from the ash pile on-site were obtained during this sampling event. Those ash samples from the waste ash pile at the rear of the property indicated elevated levels of volatile organics, inorganic metals and PCBs (Aroclors 1248 and 1254) (Ref. Nos. 18; 19, pp. 49-55). The facility is inactive, completely fenced, and there is only one security guard present on the property as a worker (Ref. Nos. 17; 19, pp. 5, 6). There are no residences, day care facilities or schools within 200 feet of the suspected soil contamination boundary (Ref. No. 2). There are no known terrestrial sensitive environments located on areas of documented soil contamination.

Air Pathway - There are no analytical results available to determine if a release to air has occurred. Since PCB's and metals are of concern at the site in the waste ash pile and dry and dusty conditions may occur, a potential for a release to air via contaminated particulates may potentially exist. The facility is inactive with one security guard on-site (Ref. No. 17). There are approximately 431,504 people living within a 4-mile radius of the site (0 - 0.25 mile, 1; 0.25 - 0.5 mile, 1,206; 0.5 - 1 mile, 4,199; 1 - 2 miles, 37,400; 2 - 3 miles, 146,043; 3 - 4 miles, 242,655) (Ref. No. 3). There are no sensitive environments located within 0.5 miles of the site (Ref. Nos. 2, 4.).

Summary

There are no analytical results to indicate a release to air has occurred from this site. Analytical results indicate the presence of volatile organics, inorganic metals and PCB's in the on-site waste ash pile. There were no analytical samples collected from the on-site groundwater monitoring wells nor were surface water/sediment samples collected from any nearby surface water bodies during the 1988 EPA RCRA sampling. There are no sensitive environments located within a half mile from the site. The nearest wetlands are two miles upstream and three-quarters of a mile downstream from the probable point of entry. There is a closed fishery for the Passaic River and a limited fishery in the Newark Bay Complex.

Very truly yours,

GARY BIELEN SITE MANAGER

JOHN D. RIÉCKHOFF

PRE-REMEDIAL PROGRAM MANAGER

DENNIS STAINKEN, Ph.D.

WORK ASSIGNMENT MANAGER

Jacusty 12, 1345.

The result Valley lewerage Commissioners. Et pronford lace.

entlesso: - Tream lontaminations suring Sovember and Jecember, 1947.

repartures from normal in the quality of allowed liquids allower to the streams shion are within the trainage area under the jurisdiction of the Tassaid Valley severes consissioners, and other factures of stantial temporary contaminations of the saters of the stream, are issuring within the following list together with the leads of correction applied:-

- devember is. Lodi issage impley station, Loui, J. J. J. Secand overdecause of recent heavy rains this plant became overloaded with the result that the swage overflowed the stop plane and ilsomarged into addis diver.
- november is. Accepted any sease liabound last, somether and the leaders surre daing the last to decome floored and the state state and the sta
- der nost inspectors found a load of refuse dumped on the bank of legislic diver in latherford slong an undeveloped section of shore. They found let of heads among the refuse shich consisted mostly of porcelain insulators and powdered surpour. The inspectors notified the Isolantite losseny and they sent some hen and cleaned up the impings.

- hovemour 10. Filetkota tomaphy, seneral eva., That detherford, A. J.

 1 discharge of white soap solution by may of the starm
 dewer readend set an herford storm ditch and discharded
 into desaid diver. Our inspector hetified the plant
 forman, and admitted it was a mistage and as it was only
 for a hiert duration the viciation was eliminated promptly.
- towarder is. Confidence torm lever, suitsville, b. I.
 A sporacio fincharge of tark liquid entered Second River,
 which lasted about is minutes. To Skiled to trace the
 source. Accountly the town of Seileville repaired this
 seem because of a bad look and we are minutaining a
 close sette on this publis.
- Overces 20. Finds detailedelli lac., 30 ast treat, classifeld, 1. 7. This concert behingstored perfects and to conside to a storm train that discussive into lacond liver. They was out laboratory equipment destaining a gine colored liquid. Our inspector as them consert this sine to their can tarry squipment into all sine to their can tarry sever like these allocation, the violation.
- coverber 20. Intermal agains kacaine course, ut indeer 1., Tabley. Careless workless camped an acid and oil waste into clonds drock. Investigation by our therector revealed hast this mas been occur ring overy might. Cour five gallons in impled and it contains a solvent (Trieniorethylens) cant is used for cameving greate and oil. They were notified to uto this imping and now they are using their samilary sewer to also so of this saste.

Dirtam lontuminations amoing lesember, 1947.

- lecember 1. Stating Stock, salitered 70.0 and stocks ind empty drums on the banks of Stocks and empty drums on the banks of Station diver, and then pave trackers from Sasaid permission to Tung abuse and relies in for fill. or languages or the dumping stopped and with the sid of ideal town officials they stopped the dumping after socit eight cruckloads and be a sumpad.

- . Consecors Josephy, Mancor ave., Selleville, N. J. a small quantity of oil reached the storm drain which discharges into Fassale River. Jur inspector investigated but sould not trace any leaks.
- The sumps were full, the pumps were operating at sepacity but this plant could not handle all the sewage, with result that it overflowed the stop plank and discharged into saidle diver. This same condition existed again on Secember 16, but these were the only violations discovered during this south.

dos:

- r 13. Laywood Chemical Company, Junter Avenue, Raywood, N. J. Lischarge of Drown colored liquid to Stink Creek. Our investigation showed that an employee ocused this waste to be washed down the storm train during cleaning Operations.
- into Tassaic River. our inspector had them empty and replace the drip jan.
- 17. Tide vater healty Company, 2 tokermon we., Diffton, 1. I. a small amount of oil was discharging into Passaic River along with their elsan water drainage. It could not be traced.
- This plant has no sanitary line and all their waste is discharged into seepage lagoons located in the marsh land at the rear of the plant. These lagoons have ash ambankments and leaks break out from time to time allowing seepage of waste into larrison breek, a tributary to Passais River. For inspector reports leakages on December 1-4, 1947. In December 3, they cleaned out the pit, by digging with a steam shovel, but on December 16, another small leak was discovered. The steam county losquito Commission are now diverting the source of Harrison breek, and when this work is completed it will be impossible for the seepage to reach Harrison breek.
 - 17. Illiance Themical Tomophy, Avenue 7., Newark, N. J. This plant recently installed 2 large concrete sumps to treat their waste waters, because they have no sanitary sewer. As previously reported violations occurred at this lant, but now are down to a min num. Further treatment will improve their efficient with the installation of an agitator.

A slocked sever daused renwer to bear up and over flow late their yard. Our inspector had them construct embendment and divert this everflow to another sewer mandale and in this manner the blocked sewer was cleared without causing a politican to legand diver.

Special lotes.

This company resectly diseased out a section of their pits energy throughout resectly diseased out a section of their pits energy they discharge their plant rests raters, but the pits have not improved enough to give them a good effluent into trans from. They have to handlary severs. ressure for further improvement is being continued.

The manistry deper frequently blocks by and overflows into a storm diten along the railroad which in term suptles into fan linkis livenes storm sewer and thence into fastals liver about a mile away. For impector no notified the engineer in lerfield repeatedly and more effective action is now promised with the co-operation of the des sewer consistings and takes office factory 1. 1948.

Jair awn diver Jegaain_s

During siterations to the existing syphon chambers at the river processary to by-pass the sewage to the Passaio Siver on several days at both the north and south processings. Studen floods and high rater in the river delayed the sore and lengthened the periods of by-pas ing.

borth fressing.

Sy-passing on Sovember 4, 3, 4, 7, 5, 19, 20, 21, 22, 25, 24, 25, 26, 20, 27, 28, 39, 30, Jeased at 10. Juna on Secember 1, 1947. To repair a leak, by-passing was resumed at 10. Juna, Jecember 17, and continued until 10. Juna on Jecember 19 when propering was jut back in service.

couth Possing.

By-passing occurred on following dates:-December 1, 2, 3, 4, 5, 5, 7, 8, 9, 10, 11, 12, 13, 14, 159 15, 17, 18, 2 19. Cessed at 11.30am on December 20, 1947.

Respectfully subsitted,

The Passaic Valley Severage Semissioners. 24 Branford Place. Newark. New Jersey.

Gentlemen: Stream Contaminations during May, 1947.

Departures from normal in the quality of liquids discharged to the streams which are mithin the drainage area scaling under the jurisdiction of the Pascale Valley severage Commissioners, occur from time to time. They are caused mostly by disturbances in treatment processes, the breezing, closeing or lessing of severs and pipelines, and the failures or dislocations of pumps, filters or other mechanical purification devices.

Most frequently these stream contaminations are saused by unavoidable accident, occasionally by carelessness and infrequently by wilful intent. They are usually discovered promptly and the necessary remedies, repairs or adjustments quickly applied.

Juch temporary contaminations of the maters of the streams during May, 1947, together with the means of correction applied, are described briefly in the following list:-

- Jay 7. Dayone steel From Dompany, Lincoln sighway, Sewark, 2, J. Soutinuod heavy rains washed away part of the retaining wall of their settling pit. This allowed some of their grossy waste to escape into Emrison Freek. They repaired the broken wall and further violation was thus alignmented.
- May 8. Hamoralay Assufactoring Company, 100 liver Drive, Parfield, T. J. Small assounts of industrial waste leaking into Haddle Siver. Our inspector reports that the trouble is caused by a leaky pump. The pollution is only slight and they are waiting delivery of a new pump which has been promised at the sud of June. The new pump will eliminate this leakage.
- The storm sewer discharges shows evidence of traces of semitary sewage reaching Jecond Siver. Our improver traced the sewage as far as must bronge where it cleared. These discharges are periodical and are due to some underground overflow or leak difficult to discover. Investigation continues.
- May 13. Passale siver, at Jubile Jervice has Josephay, Harrison, E. J. Very oily slick along their dock. Our inspector notified the plant superintendent and together they observed over the pipelines but no oil leaks could be found. The river was closely entohed and it was found that the sludge on river bed was gassing and bringing up large blotones of oil films to the

Erena Jontaninations Jurion day, 1947, June 25, 1947, Page 2.

surface some being i' : 10' or 10 sq. it. his condition is rather manual. her the tides changed the river occurs clear and the jurging stopped.

- Any 15. July 311 James, 130 James Ivenue, Jewerk, 1. J.
 Jesty fuel 311 escaping from 311 barge "Jusquenames" | 3 walle
 unloading at July 11 lock. Our inspector actified the barge
 suptain who informed aim that the tug lad squeezed the barge
 against the lock and syrung three rivets in the sull below the
 mater line. Nen the load was jumped out the leakage seased but
 left the area of river with blottenes of leavy fuel 311.
- May 13. Alifton Paper Leard Ompany, I constrain are., Miston, J. J. Lidustrial paper seate discussing into Tas ale River. Air inspector found that a valve was partly opened, salon allowed this waste to escape into Passale River. The valve was plosed thus aliminating the violation.
- And it desired enitary lever, lempson treet, Arrisia, 3. 7.

 Annote everflowing and only black waste discharging late

 Storm ditte which discharges hate reseale diver at Tan inche

 evenue. Our inspector notified thy lever epartment and they
 proceeded to clear the blockage. In May 10, everything see clear.
- Lyndhurst storm sever.

 Come oil was reaching the Passais liver with the ordinarily clean sater disonarge from this storm sever, and after considerable tracing through several industrial plants the bourse was found at 3.7. Werein wint tompany, trant wants, produced, a bile away from the Isasais Siver.

 Jacks 1978 First and train, solvents and tar oils are stored from the yard train and thence into the storm sever shigh reaches the Passais liver a sile away.

 Our inspector notified the plant superintendent and he promised to refrain from seaming the yard antil to installs an oil separator to protect the storm drain and the Passais Siver.

acs/for

heapestfully submitted,

Signed: Richard C. Smith

The Passale Valley Severage Commissioners, E4 Branford Flace, Sewark, New Jersey.

Gentlemen: Stream Contaminations during Bay, 1947.

Departures from normal in the quality of liquids discharged to the streams which are within the drainage area coming under the jurisdiction of the Fassaic Valley Sewerage Commissioners, occur from time to time. They are caused mostly by disturbances in treatment processes, the breaking, clogging or leaking of sewers and pipelines, and the failures or dislocations of pumps, filters or other mechanical purification devices.

Most frequently these stream contaminations are caused by unavoidable accident, occasionally by carelessness and infrequently by wilful intent. They are usually discovered promptly and the necessary remedies, repairs or adjustments quickly applied.

Such temporary contaminations of the waters of the streams during May, 1947, together with the means of correction applied, are described briefly in the following list:-

- Lay 7. Bayonne Stoel brum Company, Linocin Highway, Rewark, R. J. Continued heavy rains washed away part of the retaining wall of their settling pit. This allowed some of their grossy waste to escape into Barrison Creek. They repaired the broken wall and further violation was thus eliminated.
- Kay 8. Hamersley Manufacturing Company, 100 River Drive, Garfield, N. J. Small amounts of industrial waste leaking into Saddle Miver. Our inspector reports that the trouble is exused by a leaky pump. The pollution is only slight and they are waiting delivery of a new pump which has been promised at the end of June. The new pump will eliminate this leakage.
- hay 12. Watsensing Park (Locust Ave. Storm Sewer), bloomfield, E. J.
 The storm sewer discharges shows evidence of truces of sanitary
 sewage reaching Second hiver. Our inspector traced the sewage
 as far as hast Grange where it cleared. These discharges are
 periodical and are due to some underground overflow or leak
 difficult to discover. Investigation continues.
- way 13. Fassaic kiver, at Fublic Service Cas Company, Earrison, 5. J. Very cily slick along their dock. Our inspector notified the plant superintendent and together they checked over the pipelines but no cil leaks could be found. The river was closely watched and it was found that the sludge on river bed was gassing and bringing up large blotches of cil films to the

of the pumps was out of order sausing the sollection sump to overflow into the river. The everflow lasted for 15 minutes until the pump was repaired and the pump put back in service.

Nach ber Berger ber der State (1984) bei der der

- On September 2, 5, 4, 5, 8, 9, 10 and 11, intermittent overflows of iron waste were observed discharging to Second River. This was again traced to a Belleville sanitary sewer which was blocked and causing the Edison waste to back up in the Belmont Avenue sanitary sewer and to overflow through a hole in the sanitary sewer and reach Meadowbrook storm sewer through a hole in the bottom of the storm sewer. We notified the SownEngineer to remove the blockage from the sanitary sewer and the intermittent overflows seased promptly. On September 12, 15, 16, 17,18, 19, 22, 23, 24, 25, 26, 29 and 50, the Meadowbrook storm sewer discharge was reported as all clear.
- September 9. Wright Aeronautical Corp., Plant # 7, Wood-Ridge.

 Brown oily films reaching Yeld's Creek, tributary
 of Saddle River, through clarified water discharge
 line. Our inspector notified the Plant Engineer and
 upon investigation they found that in eleaning out
 the oil separators the oily films had escaped. The
 discharge was all clear two hours later.
- September 10. East Paterson Sewage Treatment Plant, East Paterson. The final effluent from this plant, which discharges into Passaic River, contained some specks of sludge. The sludge digesters were found to be filled and the sludge drying beds to be occupied with dried sludge. We urged immediate removal of dried sludge from the beds so that digesters could be relieved by withdrawal of wet sludge. This was done promptly and the effluent was improved in quality.
- September 12. Karcalus Kanufacturing Co., River Road, East Paterson.
 The clean water discharge was earrying a suspension
 of fragments of white paper pulp because the settling
 unit in service was becoming everloaded and meeded
 eleaning. Our inspector notified the Plant Manager
 and he corrected the trouble immediately by changing
 over to a fresh settling unit.

e hours and a second of a large to the deal of a

September 15. Bayonne Barrel and Drum Co., State Highway #25 and
Raymond Blvd., Newark.

Leakage of waste from seepage lagoon reaching
Harrison Creek, tributary to Passale River. Our
inspector notified the Superintendent and the work
of repairing some breaks in the ash-banked walls of
the lagoon was started immediately.

- A small quantity of oil resched the storm drain which discharges into lessed a River. Our inspector investigated but could not trace any leaks.
- December 10. Lodi Sewage Pumping Station, Lodi, N. J.

 The sumps were full, the pumps were operating at capacity but this plant could not handle all the sewage, with result that it overflowed the stop plank and discharged into Saddle River. This same condition existed again on December 16, but these were the only violations discovered during this month.
- December 12. Eaywood Chemical Company, Hunter Avenue, Maywood, N. J. Discharge of brown colored liquid to Stink Creek. Our investigation showed that an employee caused this waste to be washed down the storm drain during cleaning operations.
- December 16. Liberty Fuel Cil Company, Belleville Fike, Kearny, E. J. Frip pan on dock full of gasoline and overflow dri ping into Fassaic River. Our inspector had them empty and replace the drip pan.
- December 17. Tide ster houlty Company, 2 Acherman Ave., Clifton, H. J. A small amount of oil was discharging into Passaic River along with their clean water drainage. It could not be traced.
- This plant has no senitary line and all their waste is discharged into seepage lagoons located in the marsh land at the rear of the plant. These lagoons have ash embankments and locks break out from time to time allowing scopage of waste into Harrison Creek, a tributary to Passaio Hiver. Our inspector reports leakages on December 1-4, 1947. On December 8, they cleaned out the pit, by digging with a steam shovel, but on December 16, another small leak was discovered. The last County Losquito Commission are now diverting the course of Harrison Creek, and when this work is completed it will be impossible for the seepage to reach Harrison Creek.
- December 17. Alliance themical Company, Avenue F., Newark, K. J.
 This plant recently installed E large concrete sumps
 to treat their waste waters, because they have no sanitary
 sewer. As previously reported violations occurred at this
 lant, but now are down to a min mum. Further treatment
 will improve their effluent with the installation of
 an agitator.

The Passaic Valley Sewerage Commissioners, 24 Sranford Place, Newark E. New Jersey.

Centlement - Stream Contaminations during February and Merch, 1946.

Departures from normal in the quality of allowed liquids discharged to the streams within the drainage area under the jurisdiction of the lasses Valley Severage Commissioners, and other features of potential temporary contaminations of the waters of the streams, are described briefly in the following list:-

- February E. Rye Street Sanitary Sewer, Rye St., Paterson, N. J. Sanitary sewage being discharged into Fas aic River from this sewer. This condition was caused by a blockage of rags and other debris. Our inspector notified notified PV C Forenan in the Paterson District, who had blockage cleared promptly, thereby eliminating further pollution.
- February 2. Bayonne Barrel and Drum Company,
 State Fighway 725 and Raymond El'd Newark
 Due to a section of the retaining wall in settling pit
 washing out, some oil and dirty wash water reached Harrison
 Creck (tributary to las aid River). Our inspector notified
 the plant owner, who had break in retaining wall repaired
 promptly thus eliminating further discharge.
- February 10. V. Otilio and Sons, Contractors, Freakness ave., laterson.

 Pirt and cinder blocks were dumped into Fassaic River at
 River Strest feet of Lontgomery Street, Paserson by employees of the above concern. Our inspector informed the owner
 of the above concern that this practice must stop. He
 immediately complied with the request and no more dumping
 cocurred.
- rebruary 17. Mearny manitary Newer, Passalo Avenue, Rearny, N. J.

 Three manholes in Passalo Avenue at Sacred Heart Orphanage p
 property are overflowing sewage to street and thence into
 Passalo River via storm drain. Our inspector notified the
 Town Angineer of this condition.
- February M. Hawthorne Sewage Fumping Station, Fagaraw Road, Rawthorne.
 Sewage and industrial waste being discharged into Fassaic
 River via Goffic Brook. This is caused by a break in the
 hawthorne sanitary sewer in front of the pumping station.
 Our inspector consulted with the Town Officials, who have
 promised immediate comperation in climinating this violation.

Stream Conteminations during May, 1948, June 23, 1948, Page 1.

- May 18. Dutchess Dyeing Company, 188 & 5th St., Faterson.

 Staron waste water discharging into Passais River from Rye St., atorm sewer outlet. Our inspector went to this plant after baving lifted all storm sewer memboles to trace this waste, but they denied it was their waste. The inspector them put dye down the waste line in the finishing room and proved that this sonnection discharged into the storm sewer. The owners having been convinced, said that they would change this connection but it would take about two weeks.
- May 19. Bayonne Steel Drum, Lincoln Righway, Newark.

 Due to a break in the dirt well of their settling pit, some
 unsettled waste escaped into the meadow which drains to Harrison
 Creek, The break was repaired quickly.
- May 19. Avenue P. Dump, News k.

 A barrel of black grease was dumped at the edge of the dump and was sceping into Flum Greak. Our inspector notified the dump caretaker and he set the grease on fire and eliminated the viciation.
- Way 21. American Heirefelt Company, Lockwood 5t., Howark.

 Overfloaded settling pit discharging into Blanchard Street
 storm sewer. This concern out a ditch from their sludge pit
 direct to the storm sewer and let the effluent discharge directly. Our inspector notified them to eliminate this violation,
 and the sewer superintendent for the City of Newark is sooperating.
- May 27. Fair Lewn Industries Inc., Eiver Brive, Tair Lewn.

 Red dye waste discharging into Pessaie River. Our inspector
 and the plant superintenient went all over the plant which
 houses several industries but would find no dye waste, nor
 could they account for any firm using dyes. Investigation
 continues.
- Eay 28. 5. B. Penick and Company, Grant Avenue, Lyndburst.
 Discharge of amber fluid (soap bark used in the manufacture of fire foam) which formed a white foam when it reached lassaic River by way of the storm sewer. Our inspector motified the plant engineer who blamed a careless employee for this condition.
- key 4. Prevention
 Riverview Packing Company, 238 F 5th Street, Paterson.
 Garbage and refuse being sumped on the bank of Passaic River
 Our inspector marned the same of apossible violation, so beclean
 up this refuse.

23/1ba

Respectfully submitted,

Bigned: Richard C. Smith

- June C. Lontgomery Street sewer, Faterson, K. J.

 City sewer on Faterson Street colleged and the resultant
 ecommistion of sand and brick filled up the sand catcher of
 the 1. V. E. C. sewer at Kontgomery Street in Faterson. It was
 necessary to by-pass the sewage directly to the Passaic Siver
 while our men cleared out the debris from time to time. (The
 repairs to the city sewer were completed on July E).
- June 8. Citro Chamical Company, heywood, N. J.

 our inspector found patches of Bunker C fuel oil in the drainage ditch which receives the effluent from this plant and
 properts down at the Crack to Saddle Mivor. The inspector traced
 this to a spill of fuel oil inside the plent and he stood by
 until all the oil was cleaned up.
- June 9. Storm sower at Lagaraw Hoad and Coffle Frock, Marthorne, h. J.
 Strage was discovered flowing into Goffle Frock from this
 story sever. bur inspector notified the local sever superintendent and it was found that a blockage in the sanitary sever
 was esually sowing to back up and overflow into the storm newer.
 The blockage was removed and the sepitary newer cleaned, which
 procedure climinated the violation promptly.
- June 16. Fridge Forling Reacesy, LoSi, N. J.

 An extension to being built here and some building refuse had
 been duaged into Baddle River. Our inspector notified the
 owner and caused him to remove the refuse from the river.
- June 17. Reveau Chemical Company, Evo hiver Road, Carfield, A. J. A white forcy liquid found discharging from elean cooling water outlet. Jun inspector notified plant superintendent and it was found that some vote containing chemical residues were being cleaned out and reaching the Gran water drain. The vicition was stolled in chief and they were walked against any further offense.
- June 17. Modern Central Silk Dyeing and Finishing Company.

 Liquid masts from pit in finishing room bailed out and discurred into a storm grain and from thence into the Fas mic River, our inspector had then stor this procedure. All solids were then removed fro the pit and pinced in arms and carted many to dumps. The remainder of the liquid was disposed of in the samitary sewer.
- June 5. Moffcan-LeRoote, linguishe St., hutley, b. 7.
 Air pocket in sewer line ocused an overflow of sewage and
 waste into St. Isulis brook, a tributary of Third hiver. Our
 inspector potified the town superintendent and the plant nenager. This condition is very unusual and it soon disciptives.
- Augustic beyonne barrel and prun Company, tate highway No. 25 and reymond boulevard, Hewark, L. 2.

 A break in the wall of the settling and despose lances ellowed some untreated industrial walls to cooler to herrison or est, a tributary of lessaic hiver. Gur inspector had the break repaired immediately and the temporary violation was eliminated.

- August 17. Zenement House and Stores, 147 River St., Paterson, E. J. Fas ale River banks in the rear of above address covered with garbage and refuse, bur inspector notified Er. Rosen 50 Aster Street, Owner of the property and he had his janitor clean up this condition.
- August 17. Tenementhouse and Stores, 1 Arch Street, Paterson, K. J. Carbage and Fublish in rear of this building getting into Passalo kiver. Our inspector motified the owner Ar. Lares to have the place cleaned up.
- August 19. Bayonne Earrel & Drum Company, Lincoln Highway, Newnrk, N.J. A small leak in the walls of a seepage lagoon allowed industr al weste to reach Harrison Creek, for inspector had them repair this leak which eliminated the violation.
- August 19. American Fat and Tallow Company, Avenue P. Rewark, N. J. Settings from their settling pit discharging into flum Creek. Or inspector notified the owner who had the lenk repaired and promised to build a new settling unit, because of the poor condition of the present one.
- August 17. Reyden Chemical Company, River Prive, Carfield, N. J. A white enemical discharge into Fassaic River from a clean water discharge pipe at the north end of this plant. Our inspector notified the plant superintendent who had the discharge eliminated.
- August 20. Hudson Street Chamber, 1. V. S. C., laterson, R. J. Eypassing sewage into lassaic hiver because of collapsed city sewar filling our sand catcher with bricks and sand. Repairs completed by August 25 and violation eliminated.
- August EJ. Meadowbrook Storm Sewer, Belleville, N. J.

 Particles of fungus, containing starch, have been appearing in the usually slean discharge of the Meadowbrook storm sewer entering Second River in the Branch Brook Park extension in Belleville. These sliny fungus particles attached themselves to the granite river channel bottom and speed and grew into visible coating. Several days of tacing along the branches of the storm sewer from manhole to manhole finally r veried the source on August 25 to be the ward baking Company, 4th Avenue, Mast Grange, a distance of approximately two miles from the river outlet.

 It was found that washings from eake pan washer within the bakery had been connected to a plant storm drain which connects with the Meadowbrook storm sewer. Our inspector notified the plant engineer who connected this weste to the sanitary sewer and thereby climinated the violation.

 Several later checks have shown that this matter was definitely corrected.

Stress Contaminations during Max. - Sept. 1948. Oct. 15, 1948. Page 4.

- September 7. Fublic Service Electric & Gas Co., Sth St., Faterson.
 Cily waste discharged into Fassaic River by way of clear
 water discharge. Our inspector a tified the superintendent
 who traced this leak to an exacust valve in engine room.
 The leak was repaired and the violation eliminated.
- September 6. Montgomery Street and Lassaic River, Paterson, N. J.
 Some unnown person or persons caused to be dumped on
 the banks of Lassaic River a packing ease loaded with
 refuse.
- September 20. Public Service Carage, 66 Greenwood Ave., Contclair. Olly weste from floor we mings reaching storm sewer and fony's Brick. Our inspector notified the gara e foresse who attributed this violation to a carely a suployee washing driveway to str et. They have cil separators in the garage floor drains.
- September 20. Flintkote Company, Lentral Avenue, 7. Rutherford.
 Industrial waste reaching Fassaic River by way of
 Rutherford storm ditch. Our inspector found annit ry
 sewer blocked with asbestos sludge thence overflowing to
 street satch basin into storm ditch reaching Fassaic
 River. The superintendent was actified and he had the
 sewer cleaned, thus eliminating the violation.
- September 2J. Eayonne Sarrel & Lrux Company, Lincoln Highway, Newark.

 Saste from seepage lagoon escaping to Sarrison Cre k and
 leaving a soun of grazze on the surface waters of the
 creak. Our insector notified the plant operators who
 repaired the walls of the seepage lagoon and stopped the
 escape.
- September 20. Fantesofe Leather Company, Jefferson It., Fesselo.
 Oll from this plant discharging into Wessel Brock. Cur
 inspector with the shop foreman traced the oil to the
 calcader room. They reported this to the new plant
 superintendent who will investigate and he expects to
 install oil separators.
- Bertember 28. United liess Dye Works, Lodi. N. J.

 A discharge of gray turbid water from an 5° pipe, located in their ash dump, discharging into Saddle River and leaving a deposit on the bottom of Saddle River down stream and into Tassaic River. Our inspector notified the plant engineer, who reports it is a new installation to control their fly ash from their boilers, which previously blew all over the neighborhood when dumped on their ash pile.

 They installed a series of nineteen home filts a in addition to the sattling pit. This improved the situation.

 Investigation continues.

Stream Contaminations during Oct., 1948, November 23, 1948, Page 2.

The same of the sa

- October 14. Hohokus Bleachery, HoHokus, N. N.

 Industrial waste being discharged into HoHokus Brook
 through a difuser pipe located on the bed of the brook. This
 discharge is from their large settling pit and is spread
 over a twenty-four hour period. Our inspector informed them
 that this was a violation. This concern has been reported
 from time to time in the past and they have tried many ways
 of disposing of their waste. At times methods that were
 tried have been successful for short periods. This town
 does not have sanitary sewers.
 - Setober 20. Public Service Gas Works, 5th Street, Paterson.

 Light soke dust from water-gas generator room being washed into Passaic River, Our inspector spoke to Kr. Craig,

 Flant Engineer, who ordered employees to sweep generator room clean before washing it down.
 - October 20. Bayonne Barrel and Drum Company, Lincoln Highway, Newark.
 Seepage from industrial waste lagoon discharging into
 Ecadowland and ente ing Harrison Creek a tributary to
 Passaio River, Our inspector had them patch up the break
 in the damaged wall of the lagoon and the violation was
 eliminated.
 - Getober 21. Burns Brothers Fuel Oil Company, Riverside Ave., Newark.
 Fuel oil seeping into Fassai e River. Our inspector noticed
 oil seeping from under their dook and notified the station
 su erintendent who salled their N. Y. office. A repair
 crew found one of their tanks had developed a leak through
 a faulty rivet. The tank was emptied and the necessary
 repairs were made.
 - Ostober 22. John Majka Coal and Cil Company, 539 Colfax Ave., Clifton. A fuel bil truck owned by this concern spilled a quantity of oil on the street in Mallington at the approach of Gregory Avenue bridge. Some of this oil reached the street storm basins which discharge to Passaio River. Our inspector had them clean up the street with sand.
 - October 27. Linde-Oriffith, 4th Avenue, Newark,
 This concern as overhauling the bulkheads on Avondale Bridge (Butley-Lyndhurst). The new piers are treated with crossots oil and has left a film on the river. Considerable waste lumber has been carelessly left to float in the river. Our inspector informed the foreman of our objection and they constructed a floating barrier.

of the pumps was out of order causing the collection sump to overflow into the river. The overflow lasted for 15 minutes until the pump was repaired and the pump put back in service.

- On September 2, 3, 4, 5, 8, 9, 10 and 11, intermittent overflows of iron waste were observed discharging to Second River. This was again traced to a Belleville sanitary sever which was blocked and causing the Edison waste to back up in the Belmont Avenue sanitary sewer and to overflow through a hole in the sanitary sewer and reach Meadowbrook storm sewer through a hole in the bottom of the storm sewer. We notified the TownEngineer to remove the blockage from the sunitary sewer and the intermittent overflows ceased promptly. On September 12, 15, 16, 17,18, 19, 22, 23, 24, 25, 26, 29 and 30, the Meadowbrook storm sewer discharge was reported as all olear.
- Brown oily films reaching Feld's Creek, tributary of Saddle River, through clarified water discharge line. Jur inspector notified the Plant Engineer and upon investigation they found that in cleaning out the oil separators the oily films had escaped. The discharge was all clear two hours later.
- Beptember 10. Bast Faterson Bewage Treatment Flant, East Paterson. The final effluent from this plant, which discharges into Passaic River, contained some specks of sludge. The sludge digesters were found to be filled and the sludge drying beds to be occupied with dried sludge. We urged immediate removal of dried sludge from the beds so that digesters could be relieved by withdrawal of wet sludge. This was done promptly and the effluent was improved in quality.
- The clean water discharge was carrying a suspension of fragments of white paper pulp because the settling unit in service was becoming overloaded and needed cleaning. Our inspector notified the Plant Manager and he corrected the trouble immediately by changing over to a fresh settling unit.
- September 15. Beyonne Barrel and Drum Co., State Highway #25 and Raymond Blvd., Newark.

 Leakage of waste from seepage legoon reaching Harrison Speek, tributary to Passaic River. Our inspector notified the Superintendent and the work of recairing some breaks in the ash-banked walls of

July 20, 19/5

Mayonne Barrel and Drun Company, State Highway No. 25 and Raymond Boulevard, Newark, R. J.

Centlemen:

Passaic Velley Severage Commissioners have directed that I serve notice upon well that you are to desist from polluting Servison Creek, which is a tributary of the Passaic River between the Great Velle at Paterson. Her Jersey and the mouth of the river at Rewark Say.

The law requires that Passale Velley Severage Commissioners prevent pollution of this river and all behavior entering it between the points indicates.

The polluting unities discharged by your concorn into Harrison Creek is of socious consequence. Onless you arrange at once to coase such rollution, areceedings will be instituted against you without lumbher notice.

Yours very truly,

Louis Averbacker, Fr. Counsel

TA:AG

Registered Mail Seturn Secretar Requested OC & RVSO

September 5, 1945

Passaic Valley Sewerage Commissioners 24 Branford Place Newark, N. J.

Gentlemen:

At last Board meeting I reported on polyution originating from the Dayonne Sarrel & Drum Company of Newara, who have been discovering the washings from barrels and drums into Earry on Creek.

A notice was nest to them by Mr. Auerbacher to desist pollution. On August 13th I interviewed representatives of their concerny at their plant. I found that they and inserted five befiles in their drainage ditch which discharges into Marrison Greek and also that they had skimmed off the oil collected behind these bafiles and had thrown it on the adjacent bents. This treatment is entirely inadequate and ise informed them. They stated that they would endeater in the Acar future to connect up their polluting waste to the Newark sewer in Doronus Avenue. This treatment will eliminate their pollution and a further report will be submitted later advising the Commissioners of the progress they make in this direction.

Respectfully submitted,

Chief Engineer

Passeic Valley Sewerage Commissioners 24 Branford Place Newark, M. J.

Contlement

In reference to the pollution from the Dayonne Barrel and Drum Company, as reported at 1700 meeting. the Newark Sewer Department states that it is impracticable to construct a sanitary sewer to semye this company.

The Bayonne Barrel and Drum Common inform us that they have contacted two conterns who opecialize in apparatus for separating and removing bil, grease and solvents from industrial wastes. These first are Gale Manufacturing Company, New York Company the Josan Manufacturing Company of Michigan City Indiana.

Bayonne Gerrel and Drum Company further states that if these plans that they will construct a large lagoon in the nearby meaded land for disposal of their wasto.

Respectfully submitted,

J. Ralph Van Duyne Chief Engineer

JEYD: Tle

hmutho file

211 SUSSEX AVENUE . NEWARK 4, NEW JERSEY

RESTING

Nov. 3, 1945

Passaic Valley Sewer Commission, Mr. Ralph J. Van Duyne, Chief Eng., 20 Branford Place, Newark, N.J.

Dear Mr. Van Duyne:

We are a firm of consulting engineers interested in working with New Jersey industrial concerns who are faced with industrial waste disposal and stream pollution violations. We were given a list of such industries in Pennsylvania by the Department of Health, Sanitary Water Board, Harrisburg. However, we would appreciate a list of those industries in New Jersey which are faced with the same problem.

Thanking you for forwarding this information to us, we remain

Very truly yours.

ENGINEERS INCORPORATED

JR/o

Joseph Rosenthal - Central Mgr.

Passaio Valley Severage Commissioners 24 Branford Place Newark, N. J.

Gentlemen:

In reference to the pollution of Harrison Creek, Newark meadows, by the Reyonne Freel & Drum Company.

Very little progress has apparently been made by this Company looking toward the elimination of this pollution, since last Board meeting.

We were informed on Monday last, that they were still conferring with the Cale Cil Separator Company of New York City and the Josem Manufacturing Company of Michigan City, Indiana and that if a satisfactory treatment could not be worked out by one or the other of these companies, they intend to construct a large estiling lagoon in the meadows adjacent to their plant.

I think a letter from the Counsel informing them that we expect them to take some definite action in the near future looking toward the elimination of this pollution should be sent and I so recommend.

Respectfully aubmitted.

J. Ralph Yan Duyne Chief Engineer

JRVD: 73.9

November 14, 1945

State Righway No. 25 and Raymond Boulevard, Newark, New Jersey

Gentlemen:

The Commissioners have been advised that your concern is still polluting Marrison Creek, a tributary of the Passaic River. The Commissioners realize that you have made efforts to correct the situation and have waited what appears to them to be a reasonable time.

It appears now that you cannot determine definitely that the pollution will be eliminated within a reasonable time.

The Commissioners are required by law to bring about the ababement of pellution of the Passaic River and its tributaries below the Great Falls in Paterson. They will, therefore, have no recourse but to bring the matter to court by seeking an injunction in Chancery. Such action will be teleen by the Commissioners at the end of this south unless positive means have been adopted by your concern to eliminate the offense.

Yours very truly,

Louis Averbacher, Jr. Counsel

LA:AG

(Enc.)

Copy to P. V. S. C.

November 21, 1945

Passaic Valley Severage Commissioners 24 Branford Flace Newark, New Jersey

Centlemen:

In reference to the pollution coming from the Bayonne Barrel and Drum Company, we are informed by Mr. Dengella, one of the owners of the above blant, that in consequence of a regint letter from the Counsel of the Passaic Valley Cowerage Commissioners be again reviewed the problem of the disposal of the industrial wastes and the possibility of connecting their effluent drainage ditch into the sewer on Poremus Avenue has appeared.

He further states that he has instructed their attorney, a Mr. Hanford, to request the Director of Public Works of the City of Newark to give them immediate aid in their waste disposal problem, and that a ketter has been despectived to the Passale Valley Swarms commissioners informing them of these particulars.

Respectfully submitted,

Chief Engineer.

JEVD: 08

Rower in Smithes Kille 1115

December 5, 1945

Passalo Valley Sewerage Commissionere 24 Branford Flace Newark, N. J.

Gentlemen:

In reference to the policition of Harrison Creek, a tributary of the Passale River in Newark, from the Bayonne Barrel & Drum Company.

Nothing further has been accomplished by this concern looking towards the elimination of this pollution.

waste discharge of this Complex each day of the trade of the Commission to etert Chancery proceedings.

Respectfully submitted,

J. Ralph Van Duyne Chief Engineer

JRVD: vls

December 13, 1945

Engineers, Incorporated 211 Sussex Avenue Newark 4, N. J.

Atta Mr. Joseph Rosenthal

Gentlemen:

In reply to your request of November 3, 1945 for a list of industries in our district who are faced with industrial waste problems, at the present time there is only one such concern, the Bayonne Earrel & Drum Company, State Highway No. 25-and Raymond Elvd., Newark, N. J.

Yours very truly,

J. Ralph Ven Duyne Chief Enganeer Passaic Valley Sewerage Commissioners 24 Branford Place Newark, N. J.

Gentlemen:

In reference to the pollution from the Bayonne Berrel & Drum Company located on State Highway No. 25 and Raymond Soulevard, Newark, N. J.

This Company has now eliminated their pollution by the construction of a large seepars lagoon constructed on mendowlands edulating their plant. The outlet ditch which formerly came of the polluting waste into Harrison Crock and thence into the Passaic River, has been permanently blocked off.

It is recommended that this case be

01.08pd

Attached hereto is a report from your comist, Biobard C. Smith, relating to this former gellution.

Respossfully submitted,

J. Ralph Van Duyne Chief Engineer

JEVD: vls

56

Payonne Barrel and Drum Company, State Highway No. 25 and Raymond Boulevard, Newark, h. J.

Gentlemen:

Passaic Velley Sewerage Correstioners have directed that I serve notice upon you that you are to desist from polluting Harrison Creek, which is a tributary of the Passaic River between the Great Valls at Paterson. New Jersey and the mouth of the river at Newart Bay.

The law requires that Fassale Velley Severage Commissioners prevent pollution of this ritor and all tributaries entering it between the points indicated.

The polluting metter discharged by your concorn into Earrison Creck is of serious consequence. Unless you arrange at once to cease such pollution, procesdings will be instituted against you without further notice.

Yours very truly,

Louis Averbacher, Jr. Counsel

LA:AC

Registered Mail Seturn Seceipt Requested CO. to PVSC.

September 5, 1945

Passaic Valley Severage Commissioners 24 Branford Place Newark, N. J.

Centlemen:

At last Board meeting I reported on pollution originating from the Bayonne Barrel & Drum Company of Newark, who have been discharging the washings from barrels and drums into Karrison Creek.

A notice was sent to them by Mr. Auerbacher to desist pollution. On Abgust 13th I interviewed representatives of their company at their plant. I found that they had inserted the Paffles in their drainage ditch which discharges into Marrison Greek and also that they had skimmed off the oil collected behind these baffles and had thrown it on the adjacent with This treatment is entirely inadequate and as informed them. They stated that they would endeador in the hear future to connect up their polluting waste to the Newark sewer in Doremus Avenue. This treatment will eliminate their pollution and a further report will be submitted later advising the Communication.

Respectfully submitted,

Chief Engineer

Passeic Talley Sewerage Commissioners 24 Branford Place Newark, N. J.

Contlemen:

In reference to the pollution from the Bayonne Farrel and Drum Company, as reported at less meeting, the Newark Sewer Department states that it is impracticable to construct a sanitary sewer to serve this company.

The Bayonne Barrel and Drum Commany inform us that they have contacted two conterns who specialize in apparatus for separating and removing oil, prease and solvents from industrial wastes. These first of Gale Manufacturing Company, New York City of the Josan Manufacturing Company of Michigan City Indiana.

Bayonne parrel and Drum Company further states that if these plans fail they will construct a large lagoon in the nearby meaded land for disposal of their waste.

Respectfully submitted,

J. Ralph Van Duyne Chief Engineer

JED: Tle

Im who file

PLANNING . DESIGNING . C-RSTRUCTING . TRECTING

211 SUSSEX AVENUE - NEWARK 4, NEW JERSEY
TELEPHONE: HUMBOLDT 2-2364

Nov. 3, 1945

Passaic Valley Sewer Commission, Mr. Ralph J. Van Duyne, Chief Eng., 20 Branford Place, Newark, N.J.

Dear Mr. Van Duyne:

We are a firm of consulting engineers interested in working with New Jersey industrial concerns who are faced with industrial waste disposal and stream pollution violations. We were given a list of such industries in Pennsylvania by the Department of Health, Sanitary Water Board, Marrisburg. However, we would appreciate a list of those industries in New Jersey which are faced with the same problem.

Thanking you for forwarding this information to us, we remain

Very truly yours,

ENGINEERS INCORPORATED

TR/e

Joseph Rosenthal - General Mgr.

Passaio Valley Severage Commissioners 24 Branford Place Newark, N. J.

Gentlemen:

In reference to the pollution of Harrison Creek, Newark meadows, by the Bayonne Farrel & Drum Company.

Very little progress has apparently been made by this Company looking toward the elimination of this pollution, since last Board meeting.

We were informed on Monday last, that they were still conferring with the Gale Cil Separator Company of New York City and the Josem Manufacturing Company of Michigan City, Indiana and that if a satisfactory treatment could not be worked out by one of the other of these companies, they intend to construct a large settling lagoon in the meadows adjacent to their plant.

I think a letter from the Counsel informing them that we expect them to take some definite action in the near future looking toward the elimination of this pollution should be sent and /I so recommend.

Reamentfully submitted.

J. Ralph Ven Duyne Chief Engineer

JRYD: 72s

November 14, 1945

Bayonne Barrel and Drum Company, State Highway No. 25 and Raymond Boulevard, Newark, New Jersey

Gentlemen:

The Commissioners have been advised that your concern is still polluting Garrison Creek, a tributary of the Passaic River. The Commissioners realize that you have made efforts to correct the situation and have waited what appears to them to be a reasonable time.

It appears now that you cannot determine definitely that the pollution will be eliminated within a reasonable time.

The Commissioners are required by law to bring about the ebatement of pollution of the Passaic River and its tributaries below the Great Falls in Paterson. They will, therefore, have no recourse but to bring the matter to court by seeking an injunction in Chancery. Such action will be taken by the Commissioners at the end of this month unless positive means have been adopted by your concern to eliminate the offense.

Yours very truly,

Louis Auerbacher, Jr. Counsel

LA:AG

(Enc.)

Copy to P. V. S. C.

Passaic Valley Severage Commissioners 24 Brenford Place Newark, New Jersey

Gentlemen:

In reference to the pollution ormint from the Bayonne Barrel and Drum Company, we are informed by Mr. Angella, one of the owners of the above plant, that in consequence of a recont letter from the Counsel of the Passaic Valley Gowerage Commissioners he again reviewed the problem of the disposal of the industrial wastes and the possibility of connecting their effluent drainage ditch into the sewer on Doremus Avenue has appeared.

He further states that he has instructed their attorney, a Mr. Hanford) to request the Director of Public Works of the City of Newark to give them insediate aid in their waste disposal problem, and that a letter has been despectfied to the Passaie Valley Soverage Commissioners informing them of these particulars.

Respectfully submitted.

Chief Engineer.

JEVD: AN

Rich to 5

Bros.

December 5, 1945

Passaio Valley Sewerage Commissionera-24 Branford Place Newark, N. J.

Gentlemen:

In reference to the policition of Marrison Creek, a tributary of the Passals River in Newark, from the Bayonne Barrel & Drum Company.

Nothing further has been accomplished by this concern looking towards the elimination of this pollution.

We are taking samples each day of the trade waste discharge of this Commission to start Chancery proceedings.

Respectfully submitted,

J. Ralph Van Duyne Chief Engineer

JRVD: vls

December 13, 1945

Engineers, Incorporated 211 Sussex Avenue Newark 4, N. J.

Att: Mr. Joseph Rosenthal.

Gentlemen:

In reply to your request of November 3, 1945 for a list of industries in our district who are faced with industrial waste problems, at the present time there is only one such concern, the Bayonne Barrel & Drum Company, State Highway No. 25 and Raymond Blvd. Newark, N. J.

Yours very truly,

J. Ralph Van Buyne Chief Englieer Passaic Valley Sewerage Commissioners 24 Branford Place Newark, N. J.

Gentlemen:

In reference to the pollution from the Bayonne Barrel & Drum Company located on State Highway No. 25 and Raymond Spulevard, Newark, N. J.

This Company has now eliminated their pollution by the construction of a large seepass lagoon constructed on condowlands adjaining their plant. The outlet ditch which formerly carried the polluting waste into Harrison Crock and thence into the Passaic River, has been permanently blocked off.

It is recommended that this case be

01.0BB0.

Attached hereto is a report from your Commist, Richard C. Smith, relating to this former pollution.

Respectfully submitted,

J. Ralph Van Duyne Chief Engineer

JEVD: vls

The Justaic Valley Sewerage Commissioners, 24 Frantord Flace, Seark E. New Jersey.

Centlemen: - Stream Conteminations during lebruary and March, 1940.

Departures from normal in the quality of allowed liquids discharged to the streams within the drainage area under the jurisdiction of the lassuic Valley Dewerage Commissioners, and other features of potential temporary contaminations of the waters of the streams, are described triefly in the following list:-

- February E. Rye Street Sanitary Sewer, Rye St., Faterson, R. J.
 Sanitary sewage being discharged into Fas aid River from this
 sewer. This condition was caused by a blockage of rugs and
 other debris. Fur inspector notified notified PV-C Foremen
 in the Paterson District, who had blockage cleared promptly,
 thereby eliminating further pollution.
- Due to a section of the retaining wall in settling pit washing out, some oil and dirty wash water resched Marrison Creck (tributary to las ale Miver). Our inspector notified the plant owner, who had break in retaining wall repaired promptly thus eliminating further discharge.
- February 10. V. Otilio and Sons, Contractors, Freakhess ave., laterson. Dirt and cinder blocks were dumped into Fassaic River at River Street foot of Lontgomery Street, Paterson by employees of the above soncern. Our inspector informed the owner of the above soncern that this practice must stop. He immediately somplied with the request and no more dumping occurred.
- rebrurry 17. Acarny Lamitary Sewer, Passalo Avenue, Learny, N. J.

 Thre. menholes in Pas ale Avenue at Sacred heart orphanage property are overflowing sewage to street and thence into Passale hiver via storm drain. Our inspector notified the form Augineer of this condition.
- February 24. Hawthorne News of Pumping Station, Wagaraw hoad, Hawthorne. Sewage and industrial waste being discharged into Passais hiver via Joffle Brook. This is caused by a break in the hawthorne sanitary sewer in front of the pumping station. Our inspector consulted with the Town Officials, who have promised immediate comperation in climinating this violation.

- June E. Lontgomery Street sewer, Feterson, N. J.

 City sever on Paterson Street collapsed and the resultant
 ecommutation of sand and brick filled up the sand estator of
 the F. V. E. C. sever at Kontgomery Street in Paterson. It was
 necessary to by-pass the sewage directly to the Passade River
 while our non oldared out the debris from time to time. (The
 repairs to the city sower were completed on July E).
- Jame E. Citro Chemical Company, heywood, N. J.

 Lur inspector found patches of Bunker G fuel oil in the drainage ditch which receives the effluent from this plant and
 proceds down Stine Orich to Sachle River. The inspector travel
 this to a spill of fuel oil inside the plant and he stood by
 until all the oil age closued up.
- June 9. Storm sower at Lagaraw Hoad and Hoffle -rock, Harthorne, h. J. Sewage was discovered flowing into Goffle -rock from this storm sewer. Our inspector notified the local sewer superintendent and it was found that a bloomage in the sumitary sower was esuaing sowage to back up and overflow into the storm newer. The bloomage was removed and the senitary sewer element, unlock procedure clinicated the violation promptly.
- June 18. Pridge Powling Rencemy, Lodi, N. J.

 An extension in boing built here and some building refuse had
 been dumped into Haddle Hiver. Our inspector notified the
 cumer and caused him to remove the refuse from the river.
- June 17. Reyden Chemical Company, 200 hiver Road, Carfield, N. J. A white forcy liquid found discharging from elect cooling water outlet. Our inspector abtified plant superintendent and it was found that some vote containing checical residuon were being cleaned out and reaching the clean water craim. The vicition was storied inclinity and they were warmed against any further offence.
- June 17. Modern Sentral bilk Dyeing and Finishing Company.

 12. Third avenue, Taterson, N. J.

 Liquid maste from pit in finishing room builed out and discharged into a storm drain and from thence into the Fas wic
 Eiver, bur inspector had then stor this procedure. All solids
 were then removed fro the pit and placed in crums and carted
 away to damps. The remainder of the liquid was disposed of in
 the sanitary sewer.
- June 3.. Moffren-lehoote, linguland St., butley, L. 7.
 All pocket in sewer line ocused an overflow of sewage and
 waste into St. Laulis brook, a tributary of Third hiver. Our
 inspector notified the town superintendent and the plant menager. This condition is very what all it soon districted.
- June 30. Leyonne Sarrel and Grum Company, tate highway ho. 25 and may be to break in the wall of the mething and despite to ferribbe treet, a tributary of lessaic River. Our inspector had the break repaired immediately and the temporary violation was eliminated.

- August 17. Zenement House and Stores, 147 River St., Paterson, E. J. Fas allo River banks in the rear of above address obvered with garbage and refuse, our inspector notified Mr. Rosen 90 Ester Street, owner of the property and he had his janitor clean up this condition.
- August 17. Tenementhouse and Stores, 1 Arch Street, Paterson, E. J. Darbage and Fabrich in roar of this building getting into Passalo hiver. Our inspector motified the Owner Ar. Laras to have the place cleaned up.
- August 19. Bayonne Harrel & Drum Company, Lincoln Highway, Newark, N.J. A small leak in the walls of a seepage lagoon allowed industr al waste to reach Harrisch Creek. Our inspector had them repair this leak which eliminated the violation.
- American Fat and Tallow Company, Avanue F. Rewark, M. J. Seeps of from their settling bit discharging into flum Creek. Or inspector notified the owner who had the lenk repaired and promised to build a new settling unit, because of the poor condition of the present one.
- August 17. Ecyden Chemical Company, River Drive, Carrield, H. J. A white chemical discharge into Passaic River from a clean water discharge pipe at the north end of this plant. Our inspector notified the plant superintendent who had the discharge eliminated.
- August 20. Hudson Street Charber, 1. V. S. C., laterson, R. J. Eypassing sewage into lassaic hiver because of collapsed city sewar filling our sund catcher with bricks and send. Repairs completed by August 25 and violation eliminated.
- August 23. Fradowbrook Storm Sewer, Belleville, N. J.

 Particles of fungus, containing starch, have been appearing in the usually slean discharge of the keadowbrook storm sewer entering Second River in the Branch Brook lark extension in pelleville. These slimy fungus particles attached themselves to the grantte river channel bottom and spread and graw into visible coating. Several days of t acing slong the branches of the storm sewer from manhole to manhole finally r vealed the source on August 25 to be the word Baking Company, 4th Evenue, and Orange, a distance of approximately two miles from the river outlet. It was found that washings from eake pan washer within the bakery had been connected to a plant storm drain which connects with the headowbrook storm sewer. Our inspector notified the plant engineer who connected this waste to the sanitary sewer and thereby climinated the Violation. Several later checks have shown that this matter was definitely corrected.

Stream Contaminations during ERZ. - Sept. 1945. Cot. 15, 1945. Page 4.

- Deptember 7. Fublic Service Liectric & Cas Co., 1 5th St., Faterson.

 Ully maste discharged into Assaulo River by way of clear
 water discharge. Our inspector a tified the superintendent
 who traced this leak to an exhaust valve in engine room.
 The leak mast repaired and the violation eliminated.
- September 6. Montgomery Street and Lassaio River, Paterson, M. J.
 Some unknown person or persons caused to be dumped on
 the banks of Lassaic River a packing sass loaded with
 refuse.
- September 20. Public Service Carage, 65 Preenwood Ave., Contelair, Clly waste from floor we sings reaching Storm sewer and fony's brock, bur inspector notified the gara e foreset who attributed this violation to a carel a suployee washing driveway to str et. They have cil separators in the garage floor drains.
- September 20. Flicthote Company, Sentral Avenue, T. Rutherford.
 Industrial waste reaching Passaic River by way of
 Rutherford storm ditch. Our inspector found sanitory
 sewer blocked with asbestos sludge thence overflowing to
 street eaton basin into storm ditch reaching Passaic
 River. The superintendent was actified and he had the
 sewer cleaned, thus eliminating the violation.
- Deptember 10. Eayone Barrel & from Company, Lincoln Highway, Kewerz.

 ***aste from neepage lagoon escaping to marrison Greek and
 leaving a soun of grease on the surface waters of the
 creek. Our instactor notified the plant operators who
 remained the walls of the seepage lagoon and stopped the
 ascape.
- September 20. Fantasote Leather Company, Jefferson It., Fessele.

 11 from this plant discharging into weesel brock. Cur
 inspector with the shop forecan traced the oil to the
 extender room. They reported this to the new plant
 superintendent who will investigate and he expects to
 install oil separators.
- Reptember 28. United lieos lys works, Losi, N. J.

 A discharge of gray turbid water from an 5° pipe, loosted in their ash dump, discharging into baddle River and leaving a dejusit on the bottom of Saddle River down stream and into feeded River, bur inspector notified the plant engineer, who reports it is a new installation to control their fly ash from their boilers, which previously blew all ove, the neighborhood when dumped on their ash pile.

 They installed a series of ninetern home filts a in addition to the sattling pit. This improved the situation.

 Investigation continues.

Stream Contaminations during Oct., 1948, November 23, 1948, Page 2.

Committee of what

October 14. Hohokus Bleachery, HoHokus, H. J.

Industrial waste being discharged into HoHokus Brook
through a difuser pipe located on the bed of the brook. This
discharge is from their large settling pit and is apread over a twenty-four hour period. Our inspector informed them that this was a violation. This concern has been reported from time to time in the past and they have tried many ways of disposing of their waste. At times methods that were tried have been successful for short periods. This town does not have sanitary sewers. ...

The Transference has shown that I have been been as the branch through the property of the property of the

- Botober 20. Public Service Gas Works, 5th Street, Paterson. Light coke dust from water-gas generator room being washed into Passaic River. Our inspector spoke to Mr. Craig. 24 pag 13 july 14 Flant Engineer, who ordered employees to sweep generator room clean before washing it down.
 - October 20. Bayonne Barrel and Drum Company, Lincoln Highway, Newark. Seepage from industrial waste lagoon discharging into Meadowland and ente ing Harrison Creek a tributary to Passaio River, Our inspector had them patch up the break in the damaged wall of the lagoon and the violation was elimi ated.
 - . October 21. Burns Brothers Fuel Oil Company, Riverside Ave., Newark. Fuel oil seeping into Fassai e River. Our inspector noticed oil seeping from under their dook and notified the station superintendent who called their N. Y. office. A repair crew found one of their tanks had developed a leak through a faulty rivet. The tank was emptied and the mecessary repairs were made. -
 - October 22. John Wajka Coal and Cil Company, 539 Colfax Ave., Clifton. A fuel oil truck owned by this concern spilled a quantity of oil on the street in fallington at the approach of Gregory Avenue bridge. Some of this oil reached the street storm basins which discharge to Fassaio River. Our inspector had them elean up the street with sand.

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÷ 1.

linde-Oriffith, 4th Avenue, Newark.
This concern &s overhauling the bulkheads on Avendale Bridge Detober 27. (Mutley-Lyndhurst), The new piers are treated with crossote oil and has left a file on the river. Considerable waste lumber has been carelessly left to float in the river, Our inspector informed the foremen of our objection and they constructed a floating barrier.

August 21, 1958

Bayonne Barrel and Drum Co. Raymond Blvd. and Route 1 Newark, 5, N.J.

Attention Frank A. Langella, President

Centlemen:

Your letter of August M, 1958 was presented to the Passaic Valley Sewerage Commissioners at their meeting on August 13, 1958

The Commissioners chrheted to inform you that they wish to be continuously informed on any and all positive action taken by you to abate the pollution, and to that end I would appreciate it very much if you would give me weekly reports concerning progress on this matter until pollution ceases.

PASSAIT VALLEY SEWERAGE CONVESSIONERS

S. A. Lubetkin, Chief Engineer

SAL:ex

c/c ASG

September 19, 1958

Raymond Blvd. and Route 1 Newark 5, N.J.

Attention Frank A. Langella, President

Gentlemen:

In your letter of August 6, 1938, you stated that the plans as well as the project for the abatement of pollution of your firm would be completed by the middle of September. It is now past the middle of September and I still receive pollution reports concerning your firm.

The Passinc Valley Edwards Commissioners have directed me to inform you that junless the construction of your proposed settlement-kumming tank is started and completed very shortly, the matter will be turned over to the Commissioners' attorney to proceed against the Bayonne Barrel and Drum Company and get an injunction from the courts /equiring you to cease pollution.

Very truly yours.

PASSAIC VALLEY SEMERAGE COMMISSIONERS

S. A. Lubetkin, Chief Engineer

SAL: ez



RECONDITIONED STEEL DRUMS - BAYKOTE - ROFF SS RAYMOND BOULEVARD AND ROUTE !

NEWARK 5, N J.

MARKET 2-0110

Passaic Valley Sewerage Commissioners 790 Broad Street Newark 2, New Jersey

September 25th 1958

Attention: Mr S A Lubethin, Chief Engineer

Dear Mr Lubetkin:

Was indeed sorry to receive your letter of September 19th as I was under the impression that the Commissioners were satisfied with the progress we were making. As I explained in my previous letters, we have been constantly working toward curing this problem and have spent thousands of dollars in doing so.

We have decided to use the steel Settlement and Skimming Tank instead of concrete, the construction of which will be started very soon.

We also have a serious problem with the New Jersey Turnpike Authority in regard to the ditch known as Harrison Creek. And to make matters worse, we are presently involved in important individual Plant and Chauffeur labor negotiations. Not only do these problems require my most serious and personal attention, but the completion of the above project as well-

In view of these facts, I would certainly appreciate it if the Commissioners will allow me a little more time, as we certainly do not want to become involved in any court action, especially when a mere check would show that the BAYONNE BARREL AND DRUM COMPANY has always cooperated to the fullest extent in such matters.

To be more specific, we would require and certainly appreciate a leeway of another 60 days, at the end of which time we assure you that the Passaic Valley Commissioners will be completely satisfied with the results.

Looking forward to a favorable answer soon, I remain

Yours very truly

BAYONNE BAPREL AND DRUM O

FRANK A LANCELLA President September 29, 1958

Bayonne Barrel and Drum Co. Raymond Blvd. and Route 1 Newark 5, New Jersey

Attention Frank A. Langella, President

Dear Mr. Langella:

September 25, 1958. The Passaic Velley Sewerage Commissioners appreciate your desire to cooperate in thic matter. However the fact that it would require another sixty days for you to actually eliminate the pollution, is disturbing to the Commissioners, but if at the end of that time you would have a solution completely satisfactory to the Passaic Valley Sewerage Commissioners, naturally the Commissioners will accede to your request. However, in order to make sure that you understand the intentions of the Commissioners, they would appreciate it if you would attend their next board meeting which will be on October 15, 1958, at 2:00 P.M., at 790 Broad St., Newark, N. J.

Very truly yours.
Passaic Valley Sewerage Commissioners

S. A. Lubetkin, Chief Engineer

BAYONNE BARREL AND DRUM CO.

RECONDITIONED STEEL DRUMS - BAYKO'T KAO 1 35

NEWATH 5, N J

MARKET 2-0110

January 14, 1959

Passaic Valley Sewerage Commission 790 Broad Street Newark 2, New Jersey

ATT: Mr. Seymour A. Lubetkin

Dear Mr. Lubetkin:

I would first like to thank the Commission for the understanding they have given us with our problem. I want you to know we appreciate it very much. Secondly, I want you to know that it disturbes me very much not being able to live up to our promise of having this problem cured by this time. I had assumed that all that was needed was a sewer outlet or a separation arrangement. Insofar as the sewer line is concerned, I was hopeful of getting some help from the City in giving us an outlet. At the same time, we had plans for a separating tank, either steel or concrete, that Corado Brothers have been working on. I understood that these plans met with your approval. However, your inspectors were down to see me yesterday; and after some discussion about this problem, I decided to call in an expert in sewerage treatment, namely, Mr. E. R. Grich of Paterson, New Jersey, who I have instructed to get in touch with our contractors, Corado Brothers, to work very closely with them in the hope that this problem will be cured soon. In the meantime, I have instructed our plant chemist to collect two samples a day of all waste water so we will have an idea as to what we're up against with regard to neutralizing, settling, etc.

Out of all this, I have concluded that this problem is a little more technical than I first anticipated, and in the process of trying to make a final decision, I discovered that even after we invested a large sum of money, we might still have the problem with us. Then, of course, the holidays came along, and now, the final decision to make a technical approach to this problem. You can be assured that I am deeply concerned about this problem. Our record in the City of Newark is spotless, and we would prefer not to have to go to court to settle this problem.



Passaic Valley Sewerage Commission ATT: Mr. Seymour A. Lubetkin

January 14, 1959

Also, I have instructed Mr. Carado in keep in constant touch with you with regard to the above.

I would like to thank you and the Commission in advance for your andress will as:

Sincerely mars.

BAYONNE BARREL AND DRUM CO.

Frank Trangella

FRANK, A. LANGELLA,
President

FAL:ld

August 21, 1958

Bayonne Barrel and Drum Co. Raymond Blvd. and Route 1 Newark, 5, N.J.

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PASSAIC VALLEY SEMERAGE CONSTRUCTORS

S. A. Lubetkin, Chief Engineer

SAL:ez

c/c ASC

September 19, 1958

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Very truly yours,

PASSAIC VALLEY SEVERAGE COMMISSIONERS

S. A. Lubetkin, Chief Engineer

SAL:ez

BAYONNE BARREL AND DRUM CO.

RECCNDITIONED STEEL DRUMS - BANKOTE - ROCH SS RATMOND BOULEVARD AND ROUTE !

NEWARK 5, N J.

MARKET 2-0110

Passaic Valley Sewerage Commissioners 790 Broad Street Newark 2, New Jersey

September 25th 1958

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Looking forward to a favorable answer soon, I remain

Yours very truly

BAYONNE BARREL AND DRUM CO

FRANK A LANCELLA

President

September 29, 1958

Bayonne Barrel and Drum Co. Raymond Blvd. and Route 1 Newark 5, New Jersey

Attention Frank A. Langella, President

Dear Mr. Langelle:

This will acknowledge receipt of your letter of September 25, 1958. The Passaic Velley Sewerage Commissioners appreciate your desire to cooperate in this matter. However the fact that it would require another sixty days for you to actually eliminate the pollution, is disturbing to the Commissioners, but if at the end of that time you would have a solution completely satisfactory to the Passaic Valley Sewerage Commissioners, naturally the Commissioners will accede to your request. However, in order to make sure that you understand the intentions of the Commissioners, they would appreciate it if you would attend their next board meeting which will be on October 15, 1958, at 2:00 P.M., at 790 Broad St., Newark, N. J.

Very truly yours, Passaic Valley Sewerage Commissioners

> S. A. Lubetkin, Chief Engineer

BAYONNE BARREL AND DRUM CO.

RECONDITIONED STEEL DRUMS - BA-KO'E PRO + SS RAYMOND BOULEVARD AND FOUTE !

NEWACK 5. N.J.

MARKEY 2-DIIC

January 14, 1959

Passaic Valley Sewerage Commission 790 Broad Street Newark 2, New Jersey

ATT: Mr. Seymour A. Lubetkin

Dear Mr. Lubetkin:

I would first like to thank the Commission for the understanding they have given us with our problem. I want you to know we appreciate it very much. Secondly, I want you to know that it disturbes me very much not being able to live up to our promise of having this problem cured by this time. I had assumed that all that was needed was a sewer outlet or a separation arrangement. Insofar as the sewer line is concerned. I was hopeful of getting some help from the City in giving us an outlet. At the same time, we had plans for a separating tank, either steel or concrete, that Corado Brothers have been working on. I understood that these plans met with your approval. However, your inspectors were down to see me yesterday, and after some discussion about this problem, I decided to call in an expert in sewerage treatment; namely, Mr. E. R. Grich of Paterson, New Jersey, who I have instructed to get in touch with our contractors, Corado Brothers, to work very closely with them in the hope that this problem will be cured soon. In the meantime, I have instructed our plant chemist to collect two samples a day of all waste water so we will have an idea as to what we're up against with regard to neutralizing, settling, etc.

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Passaic Valley Sewerage Commission ATT: Mr. Seymour A. Lubetkin

-2-

January 14, 1959

Also, I have instructed Mr. Corado to keep in constant touch with you with regard to the above.

I would like to thank you and the Commission in advance for

BAYONNE BARREL AND DRUM CO.

FRANK. A. LANGELLA,
President

FAL:ld

HAZARDOUS WASTE INVESTIGATION

Inspector: Tom Downey

Date: 2/22/82

Location: Bayonne Barrel and Drum Co.

St: 154 Raymond Boulevard

Town: Newark

County: Essex

Lot: 3

Block:5002

Origin of Complaint:

Complaint: Investigate housekeeping, disposal practices and possible

illegal incinerator.

Findings:

On 12/2/81, at 1200 hours, I met on-site with Lenny Cerasia, plant foreman for Bayonne Barrel and Drum. I had intended to conduct a RCRA compliance inspection in addition to the investigation, however, George Shaneen, the company official in charge of environmental affairs, was not in.

As we toured the twenty acre site, Mr. Cerasia explained that Bayonne Barrel takes in dirty and damaged drums and cleans and reconditions them. Closed head drums are cleaned using chains and a caustic solution. The spent solution drains into a 5,000 gallon holding/settling tank and is then pumped into a 60,000 gallong holding/settling tank. The liquid is decanted to the sewer under permit by the Passaic Valley Sewage Commission (PVSC). Open head drums are placed on a conveyor belt and moved through an incinerator which burns the residue out of the inside. This residue falls to the ground where it is collected in two subsurface holding/settling tanks. Residue mixes with conveyor belt cooling water. Cooling water drains down through residue and ties into the same settling tank system mentioned above. Accumulated residue or incinerator ash is then shoveled out and placed in a dump trailer. This material is then manifested out for disposal at S & W in Kearny.

I examined manifests and found that 44 of the last 48 shipments went to S & W with the remaining four going to Grows. Bayonne generates about 40,000 lbs of incinerator ash and sludge a month. This amount includes the sludge that settles out in the four referenced tanks. Proper shipping names on manifest were not descriptive enough and it could not be determined which material came from which tank. S & W fills out and supplies manifests for Bayonne. In a conversation a few weeks later with Brad Gradner, Envl. Coordinator for S & W, it was explained that manifests in the future would be more descriptive.

Further investigation outside was done in the drum unloading area. This area was the site of a few minor spills. I checked a few drums to make sure they were empty. Mr. Cerasia explained that employees are instructed not to accept any drums which have more than one inch of residue in them. A drum crusher in this area revealed what appeared to be sludge and residue accumulation underneath.

I concluded my investigation by touring the entire twenty areas of the site. The remaining section of the site was used for empty drum storage. I did not see

any evidence of land disruption which might indicate some thpe of disposal on-site.

1/27/82 Investigation

At 10:30 hrs., I returned to Bayonne Barrel and Drum to condut a RCRA compliance inspection. I was accompaned by EPA attorney Jodi Alper. During the inspection it was noted that the 5,000 gallon tank was overflowing to a storm sewer. According to George Shaneen, company representative, pumps and lines from 5,000 gallon tank to 60,000 gallon holding tank were frozen, thus liquid was backing up in settling tank Besides overflow from the settling tank there were two breaks in the line leading into the settling tank (see map). Liquid from these breaks was flowing across pavement and into storm sewer. There was no means to stop flow into the 5,000 gallon tank with the exception of halting production. (Only the incinerator operation was working.) Samples TD063 from the 5,000 tank, TD064, from break in line nearest the 5,000 gallon tank, TD065, break in line near boiler building and TD066 from flow of liquid entering storm sere, were taken. Phots 1-8 taken of flow and source.

We then met with the owner, Frank Langello and discussed the situation. Mr. Langello was not all that cooperative. He had no intention of stopping production to halt flow. He stated that flow would cease when production stopped at 1730 hours. He did instruct an employee to start charcoal fires in buckets in pump house and under frozen lines and to keep them burning all night. He was not sure if sewer in question led to PVSC or river. (I contacted Tom Mack of PVCS but he could not tell either.) Mr. Langello said that he would attempt to free pumps and lines early the next day but he still intended to operate production whether lines were free or not. Mr. Langello said that discharge had been going on for the past 2-3 days, however, an unidentified employee stated that discharge had been going on for two weeks. Discharge to sewer was estimated at 5-10 gallons per minute.

At 1530 hours, I notified the Division of Hazardou Management (DHM) and spoke with Tony Catanese and again at 1700 hours and spoke with Joe Goliszewski. It was agreed that I would stay on-site and monitor flow until it decreased. DHM would then send someone to the site first thing Thursday morning, 1/28/82. Jody Alper suggested that the EPA Emergency Response unit be notified, however, I assured her that the DEP could handle it.

At 1945 hours I noted that flow had decreased to about 2-4 gallons per minute. No flow was noted from settling tank or break nearest tank. Flow from break near boiler building now appeared to be clearer than before. At 2000 hours, I left the site.

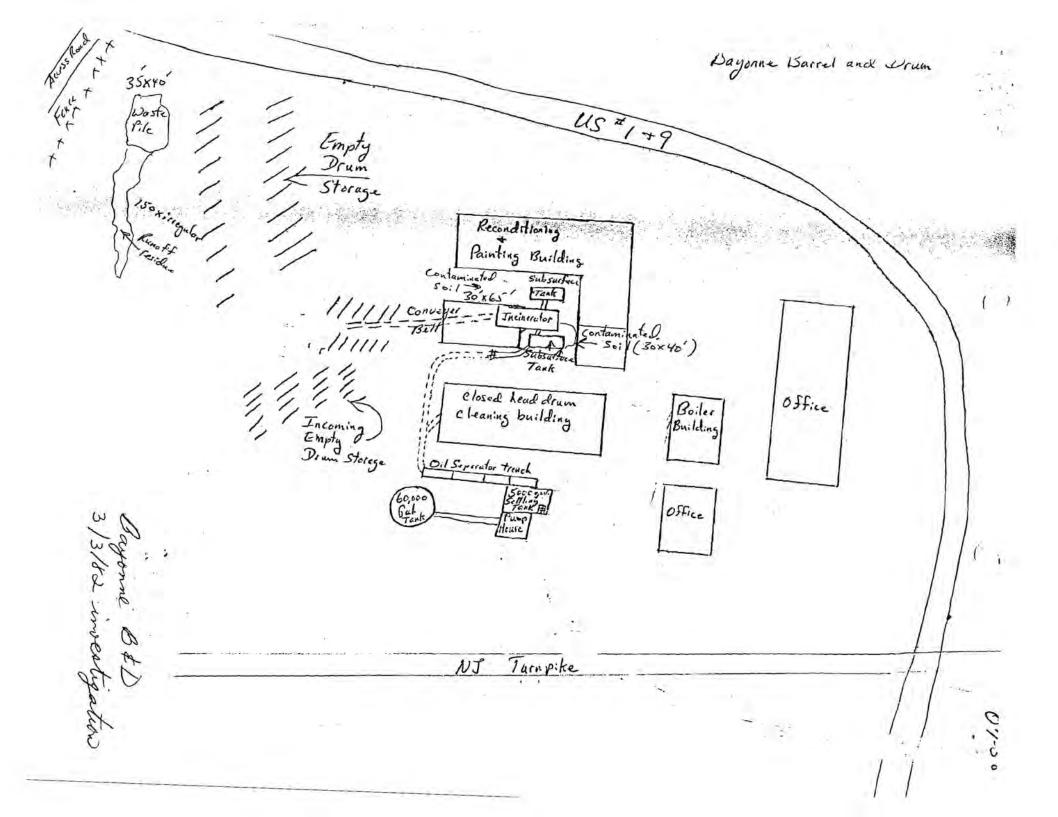
The next morning at 0900 hours, I contacted Joe Goliszwski. Mr. Goliszwski told me that Chris Schiller of Division of Water Resources (DWR) had been notified the previous evening and that they would respond this morning. I then contacted Mr. Schiller's office and left a message for him to contact me. One hour later, I called again and spoke with Mr. Schiller who informed me that his office was not responding since DHM was handling the case. I explained that they were not handling the case and he told me he would look into this mix up. A short time later, I received a call from Jodi Alper who informed me that she had spoke with Mr. Schiller and DWR would respond. I understand that they had someone on-site about 1330 hours that day. Had I known the previous evening that no one from the DEP was going to respond until the next afternoon I would have gone back up myself the following morning.

In a conversation earlier that day with Newark City Engineer Robert Bienz, I was told that the storm sewer in question flows from Bayonne Barrel and Drum property under the NJ Turnpike and into Harrison Creek which inturn flows into the Passaic River.

Housekeeping on-site was generally poor, especially around the incinerator area, drum crusher and settling tanks. Most of the site was covered with snow during my second inspection but I did notice a few areas of what appeared to be soil contamination.

cc: Jody Alper, EPA
Tony Catanese, DHM
Chris Schiller, DWR

thomas Work



Update of Bayonne Barrel and Drum(BBD)

Complaint: As of 3/4/87, the DOJ has sent the complaint to their Newark regional office where it will be filed. It is expected to be filed next week. It will be issued to both BBD and the owner. Alleged violations include:

* TSCA violations

*Violations of Consent Order *RCRA violations *3007 request violations

ORC has contacted the appropriate NJDEP legal staff of this action.

Results of Investigations: Two investigations have been performed at the site; one for NJTA and one approved pursuant to the consent order paid for by the bank. Both investigations indicate gross contamination of the soils, sediment, buildings and groundwater in certain locations. Contaminants include vo's, acid extractables, base neutrals and metals. Levels range up to in the 100ppm range(1000ppm in landfill). PCB's were also found in soils and groundwater at levels greater than 50ppm.

The investiagtion also indicated because of the pattern of contamination it not a result only from BBD but from the previous owners. A landfill and surface had existed at the site owned JCPL according to one investigation.

Recommendations: Allow ESD to sample additional locations as in proposed workplan. Write a 3007 letter to previous owners for information of their waste practices. PCBs may indicate this power company as contminant source.

ASTDR Report: This report which was recently finalized contradicts ERRD's 84 assessment. It concludes that certain areas are a threat to human health. It generally recommends the following: Isolate and dispose of ash pile, characterize certain areas of the site, restrict workers contact with certain areas, sample soils near office buildings

Recommendations: Inform immiedately and/or meet with all parties involved. This would include BBD, leasors, bank, and NJTA. It will also be nessary to coordinate with appropriate NJ state agencies: NJDOH, NJDEP and perhaps the town of Newark. An approach could be taken similiar to Occicidental requesting leasors to come up with plan. Also it may be appropriate to contact CERCLA in order to establish if immiediate removal is needed or possible under CERLA. Also we should include in ESD proposal the additional sampling locations.

Leasors Contact: A consultant firm has been hired by Apex company, a leasor, to investigate the site and propose an agreement with EPA to cleanup. This may include alternative technology approaches and an eschow account. A meeting is scheduled for next Thursday, management concurrence is required.

V. ENFORCEMENT HISTORY

This section sets out the factual history of this referral. Where appropriate, relevant documents are referred to and appended hereto as Attachments.

- 1978 1980 -
- Analysis of samples collected from the Bayonne Facility was conducted on benalf of the company for the G.R.O.W.S. disposal facility and on behalf of S&W Waste, Inc. (Manifest information available in Region II's files reveals shipments between 1980 and 1983 of hazardous waste from the Bayonne Barrel facility to S&W Waste, Inc., 25 Delmar Road, Jersey City, New Jersey.)
- December 12, 1979 Martin Jacobson of EPA Region II's Edison office conducted a hazardous waste inspection and apparently took photographs. He found the facility "generally clean", except for an area near the open drum incinerator.
- ugust 1980 Bayonne Barrel & Drum submitted a "Hazardous Waste Notification Form" to EPA, pursuant to 42 U.S.C. \$6930. (Attachment 1)
- ctober 1980 An inspection by New Jersey discovered poor housekeeping and an illegal discharge to a storm drain. This discharge was apparently corrected.
- ctober 9, 1980 EPA sent Bayonne Barrel an "Acknowledgement of Notification of Hazardous Waste Activity" and assigned the facility EPA identification number NJD009871401.
- by ember 12, 1980 Bayonne apparently submitted a Part A application to EPA. (Unfortunately, Region II no longer has the complete Part A in its files. It may have been returned to the company. Region II has a copy of two pages that appear to be from the Part A.)
- Bayonne Barrel filed a New Jersey "Supplement to Registration Statement for a Solid/Liquid Waste Collector Hauler" and included on the form the EPA I.D. number of S&W Waste. Subsequently, Mr. W. Moscetello of S&W Waste told New Jersey inspectors of compliance problems at the Bayonne facility.
- Bayonne responded to EPA and stated that it only nandled "empty drums". The company withdrew its prior application for a permit. (The EPA letter to which Bayonne was responding is missing.)
 (Attachment 2)

January 28, 1981, January 27, 1982, January 28, 1982, March 3, 1982, March 31, 1982, May 11, 1982 -

> Inspections of the facility documented violations of RCRA regulations. These inspections were mainly conducted by Tom -Downey, an employee of the New Jersey Department of Environmental Protection, who was conducting RCRA inspections for EPA pending authorization of New Jersey's program. On January 27, 1982 Downey and Jodi Alper, an EPA lawyer, observed that the settling tank at the facility was over flowing and that the lines leading into the settling tank at the facility were over flowing. They also saw how problems in the lines leading into the settling tank were causing a discharge of hazardous waste into a storm sewer (approximately 5 to 10 gallons per minute). An unpermitted waste ash pile contaminated with hazardous waste was present then and during later inspections. Samples were collected on January 27, 1982 and March 3, 1982 and photographs were taken on January 27, 1982, March 3, 1982, and March 31, 1982.

Pebruary 24, 1982 and May 25, 1982 -

Analyses of samples collected at the facility established the presence of hazardous waste there. These two analyses were performed by Stablex-Reutter, a contractor hired by the New Jersey Department of Environmental Protection.

March 15, 1982 and May 15, 1982 -

Downey had telephone conversations with Frank Langella the president of the Bayonne Barrel, in which he discussed the need to remove the waste ash pile.

EPA Region II issued Bayonne Barrel an administrative Complaint, Compliance Order, and Notice of Opportunity for Hearing pursuant to Section 3008 of RCRA based on the January 27, 1982 and March 3, 1982 inspections. The Complaint alleged that the company had stored and disposed of hazardous waste without a permit in violation of 42 U.S.C. § 3005. The Complaint also cited the company for violations of 40 CFR Sections 265.31, 265.251, and 265.253. A penalty of \$55,000 was proposed. (Attachment 3)

July 13, 1982 - Bayonne Barrel filed a petition for bankruptcy under Chapter 11. (Docket No. 82-04747)

January 12, 1983, January 19, 1983, July 14, 1983, and August 23, 1983-

Downey inspected the Bayonne Barrel facility and observed the continued presence of the waste ash pile at the facility.

- May 10, 1983 Bayonne filed an answer to EPA's May 1982

 Complaint. The company argued that all proceedings to obtain civil penalties and to obtain the removal of the ash pile were stayed pursuant to 11 U.S.C. §362, the automatic stay provision in the Bankruptcy Code.
- Summer of 1983 A different company considered purchase of the Bayonne facility, but then withdrew.
- September 1983 The company apparently ceased operations.
- January 25, 1984 Bayonne's lawyer explained the company's situation in a letter to EPA and why it felt a Consent Agreement was not required.

 (Attachment 4)
- January 1984 An anonymous tip suggested that drums were being removed from the Bayonne facility and being dumped illegally at night. Copies of the pertinent documentation were passed onto criminal investigators for EPA Region II and New Jersey.
- February 13, 1984 The Port Authority of New York and New Jersey inquired as to the status of the Bayonne property as part of an effort to locate possible sites for future economic development projects.
- Pursuant to an order of an administrative law judge, Bayonne Barrel submitted a list of witnesses to be called by the company at an administrative hearing on EPA's Complaint, such hearing to be held pursuant to the provisions of 40 CFR \$22.01. EPA also listed its witnesses and evidence for the hearing. (Attachment 5)
- April 30, 1984 EPA submitted copies of photographs to be introduced by the government at the hearing.

May 9, 1984 -

EPA requested the permission of the administrative law judge to amend the Complaint to delete the proposed assessment of a civil penalty. EPA also requested a postponement in the hearing date so that the propriety of EPA's proceeding could immediately be confirmed in bankruptcy court.

May 16, 1984 -

A report was finalized on a RCRA inspection of the Bayonne facility conducted by EPA Region II staff on February 17, 1984. The report featured photographs taken of the facility and the results of nine samples collected from different locations at the facility. The sampling confirmed that hazardous waste was present in the waste ash pile, in the soil, and elsewhere at the facility. Analysis of a composite soil sample collected around the ash pile revealed the presence of polychlorinated biphenyls. (Attachment 6)

July 17, 1984 -

In the early summer of 1984, a motion was filed in the United States Bankruptcy Court for the District of New Jersey seeking a determination that EPA's RCRA enforcement action was exempt from the bankruptcy automatic stay under 11 U.S.C. \$362 (b)(4) and, in the alternative, relief from the stay pursuant to 11 U.S.C. \$362 (d)(1). July 17, 1984, United States District Judge Dickinson R. Debevoise, who handled the motion in the midst of temporary turmoil over the jurisdiction of bankruptcy courts, signed an Order stating that "pursuant to 11 U.S.C. §362 (b)(4), EPA's proceeding with enforcement action under Sections 3008 or 7003 of RCRA or Section 106 of CERCLA is exempt from the automatic stay." (Attachment 7)

July 24, 1984 -

EPA's lawyer sent Bayonne Barrel's lawyer a copy of the results of sampling performed in February 1984.

July 25, 1984 -

EPA's lawyers requested an evaluation of conditions at the facility by the Region II Emergency Response Branch. This request was made as regional staff considered the possibility of issuing an Order pursuant to

appropriate at that time using the then-existing criteria in the National Contingency Plan for such an action. (Attachment 11)

- October 5, 1984
 Pursuant to the Consent Order, Dan Raviv Associates submitted a workplan for sampling soil, the waste ash, and groundwater. The consultant was apparently hired by the First National State Bank which has a mortgage on the property owned by Frank Langella and Bayonne Barrel.
- October 25, 1984
 Following up on telephone conversations of
 October 23, 1984, EPA's Sawyer reminded Bayonne
 of the requirement in the Consent Agreement that
 a \$150,000 performance bond be posted and confirmed
 that the company was to submit information on its
 plan to test and remove the waste ash piles at the
 facility. (In addition to the large outside ash
 pile, it turned out that there was also a much smaller
 ash pile inside one of the structures.)
- Late October 1984 EPA received letters dated October 24, 1984 and October 25, 1984 outlining proposed sampling and removal of the ash piles.
- October 31, 1984 Bayonne's lawyer wrote the bank suggesting that it post the financial bond.
- November 21, 1984 EPA's Sawyer reminded Bayonne of the financial assurance requirement in the Consent Order.
- December 4, 1984 Bayonne's lawyer wrote EPA to explain how he was caught in a bind between EPA and the bank as he tried to arrange for a financial assurance mechanism.
- December 5, 1984 EPA commented on the proposed program for sampling the waste ash piles.
- December 19, 1984 Bayonne's lawyer wrote EPA outlining the financial "Catch 22" situation in which the company found itself. (Attachment 12)
- January 9, 1985 National Corporate Disposal Inc. notified EPA that it was an authorized representative of Bayonne. The company apparently was hired to remove the ash piles and possibly to pump out the tanks.

Section 106 of CERCLA to accomplish at least partial cleanup at the site.

August 3, 1984 -

Bayonne's lawyer requested that the administrative hearing on EPA's Complaint be postponed. He mentioned the bank with a first mortgage on the property had hired an environmental consulting firm, and he referred to an offer to purchase the property owned by Bayonne Barrel and Mr. Langella for \$2.1 million. (Attachment 8)

August 1984 -

A "Preliminary Site Assessment" Report was prepared for EPA by the Region II Technical Assistance Team following a site inspection on August 7, 1984 to evaluate the need for an immediate removal action under 40 CFR 300.65 (a) of the National Oil and Hazardous Substances Contingency Plan. (Attachment 9)

August 13, 1984 and August 16, 1984-

Region II opposed postponement of the administrative hearing and sent Bayonne's lawyer copies of photographs taken in February 1984 of conditions at the facility.

- August 17, 1984 With the approach of the administrative hearing scheduled for August 20 and 21, 1984, Bayonne Barrel signed a Consent Agreement and Consent Agreement.
- September 3, 1984 The Regional Administrator of EPA Region II issued a RCRA Consent Agreement and Consent Order. (Attachment 10) Pursuant to the Order, Bayonne had to:
 - Submit a closure plan and decontaminate the facility,
 - 2. Remove the waste ash pile,
 - Undertake a soil and aqueous sampling program,
 - Undertake a groundwater monitoring program, and
 - Post a \$150,000 performance bond.
- September 5, 1984 Consent Agreement and Consent Order was sent to Bayonne's lawyer by Certified Mail, Return Receipt Requested.
- October 2, 1984 The Region II Emergency and Remedial Response
 Division advised Region II's legal office that
 the preliminary site assessment had led to the
 conclusion that an immediate removal was not

ry 18, 1985 -

Soil samples were transferred by Dan Raviv Associates to a laboratory for analysis. On February 1, 1985, laboratory results revealed the presence of PCBs at a level of 65 parts per million in one portion of the outside ash pile. (Attachment 13)

January 29, 1985 -

EPA wrote Bayonne's lawyer stating the conditions under which EPA would waive its requirement that full EP-toxicity testing be performed on the waste ash piles.

February 11, 1985

Bayonne accepted the validity and accuracy of all sampling performed on February 17, 1984 and of the subsequent analysis of those samples. Bayonne admitted the waste ash piles contained hazardous waste. (Attachment 14)

April 5, 1985 -

In a memorandum, dated April 5, 1985, Ted Gabel, a hydrologist with EPA Region II's Solid Waste Branch, summarized his and Louis DiGuardia's February 7, 1985 visit to the Bayonne facility to discuss proposed work with company representatives (Attachment 15). Gabel noticed that on top of the ash there was additional material of a distinct coloration and shape. Dan Raviv told Gable in early 1985 that this material had come from the cleaning out of tank bottoms.

Early May 1985 -

After consulting with officials in the New Jersey ECRA office, EPA's Gabel sent Dan Raviv Associates a letter with EPA's modifications of the workplan submitted by Bayonne on October 5, 1984.

June 6, 1985 -

The consultant responded to EPA's May 1985 letter.

July 26, 1985 -

EPA's Gabel approved the Workplan submitted on October 5, 1984 as modified by the June 6, 1985 letter. EPA also outlined the type of information to be submitted by the company in its report on the sampling results and its closure plan. (Attachment 16)

Fall 1985-

Drums were being shredded at the site. On October 9, 1985 a representative of Dan Raviv Associates reported that there were 50,000 drums at the site. Linda Zaninelli of the New Jersey DEP (Waste Mangement, Northern Field Office) conducted an inspection on November 6, 1985. She apparently found that the drums appeared to be "empty".

October 23, 1985 -

The New Jersey Turnpike Authority wrote EPA that because of contemplated widening of the turnpike, the Authority expected to "take" part of the Bayonne facility and was considering undertaking the sampling program at the facility. (As of June 1986, it appeared the expansion of the turnpike would be more modest and that the taking would not occur.) An aerial photograph of the properties was attached to the October 23, 1985 letter. The Authority had hired Louis Berger & Associates as its technical consultant

November 19, 1985

and

1985

December 6,

Dan Raviv Associates in two progress reports described how soil borings, subsurface soil samples, surface sediment and surface water samples were collected for analysis.

- December 2, 1985 -
- Gabel, Roger Ennis, and Charles Anderson of Region II's Solid Waste Branch visited the site to observe the installation of monitoring wells. Gabel saw the continued presence and deteriorated condition of the waste ash. He also noticed a small area of red colored soil near the location where drums had been crushed.
- December 5, 1985 EPA's Gabel reminded Mr. Langella by telephone of the need to remove the waste ash piles.
- January 7, 1986 Gabel visited the site to observe methods being used by representatives of Dan Raviv Associates for the sampling of the monitoring wells. While there, he observed the continued presence of the waste ash at the site.
- January 9, 1986 EPA's Sawyer sent Bayonne's lawyer a letter stating the company was in violation of the Consent Agreement. The letter recited the wording of the paragraphs relating to removal of the waste ash pile and arranging for a financial assurance mechanism. A copy of the Consent Agreement was
- January 17, 1986 Bayonne's lawyer advised EPA that the company had signed a contract for the sale of the facility. The letter said Bayonne was financially unable to post a bond and accused EPA of delay in its earlier review of workplans submitted by the company. (Attachment 18)

enclosed. (Attachment 17)

March 7, 1986 -

Bayonne's lawyer advised EPA's Sawyer of the details of the proposed transfer of the property, and on March 10, sent EPA a copy of the Purchase Agreements. Waste Resources Economic Development Corporation and Nationwide Scrap Tire Removal, Inc. are to buy the Bayonne facility for \$2,500,000, provided industrial development bonds can be obtained. These two companies, which are apparently newly-formed and closely-neld corporations, are also to buy the adjacent 5.5 acres from Mr. Langella for \$130,000 per acre. No definite closing dates were established. (Attachment 19)

June 10, 1986 -

Region II sent both Langella and Bayonne Barrel a letter requiring, pursuant to Section 3007 of RCRA, 42 U.S.C. \$6927, the submission of data collected on conditions at the two properties. A site inspection is also being scheduled for the near future.

Late June 1986 -

EPA's Sawyer wrote Roff Lewin of the New Jersey Attorney General's office and advised him that it appeared that the proposed transfer of the two properties would trigger the New Jersey Environmental Cleanup and Responsibility Act.

July 1986 -

Region II plans to inspect the site, a portion of which is currently being used by a corporate tenant which stores large apparently non-hazardous containers (similar to those imported on cargo ships). EPA employees had first observed the presence of this tenant during the December 2, 1985 inspection



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION II EDISON, NEW JERSEY 08837

December 5, 2000

Paul Harvey, Case Manager
Bureau of Federal Case Management
New Jersey Department of Environmental Protection
P.O. Box 028
401 East State Street, 5th Floor
Trenton, New Jersey 08625

Dear Paul,

As we discussed, presented below is an outline of the work needed for the remediation of the Bayonne Barrel and Drum Site.

- 1. Wastewater Treatment Area removal of all liquids, solids and sludges from all above and belowground tanks and oil/water separator. The removal of the oil/water separator and tanks. Removal and off-site disposal of all contaminated soil (surface to ground water table) within and surrounding the treatment area.
- 2. Waste Piles removal and disposal of the remaining waste piles.
- 3. Incinerator Area demolition and removal of the incinerator building and associated structures, removal of the ash collection tanks, and the removal and disposal of ash and all contaminated soil (surface to groundwater table) within and surrounding the incinerator area.
- 4. Yard Area Research available options to address feasibility of hot spot (PCB ≥ 50 ppm, dioxin ≥ 20 ppb toxicity equivalents) removal, treatment and/or off-site disposal.
- 5. Yard Area remediate yard area to prevent potential for migration of contaminants and potential for direct human contact.
- 6. **Groundwater** complete procedures and application for establishing a Classification Exception Area (CEA) pursuant to N.J.A.C. 7:9-6 et seq.
- 7. Repair and maintain perimeter fencing and gates to restrict unauthorized access (as needed).
- Board the widows and doors of all buildings to restrict unauthorized access.

Please review and provide any comments or concerns. We would like to present this to the PRPs

and the City of Newark's potential developer as soon as possible. Should you have any questions please feel free to contact me at (732) 906-6983.

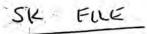
Thank you again for your assistance.

Sincerely,

Joseph Cosentino, OSC Removal Action Branch

Joseph Coventino

cc. D. Finn



REMOVAL ACTION FACT SHEET

BAYONNE BARREL & DRUM CO. NEWARK, ESSEX COUNTY, NEW JERSEY

REGION: II

NPL: No

ESTIMATED PROJECT CEILING: \$2,400,000

OSC: Cosentino

INCIDENT CATEGORY: Drums, cylinders, tanks, ash/soil START DATE: 1) 7/14/94

COMPLETION: 9/28/95

2) 9/29/95

On-going

INCIDENT DESCRIPTION:

The Bayonne Barrel and Drum(BB&D) site (Site) is located at 150 Raymond Blvd. in the City of Newark, Essex County, New Jersey. The site is approximately 14.5 acres in size and is bounded by Routes 1 & 9 on the west, the New Jersey Tumpike on the east and a movie theater on the south. Operations conducted by B B&D included the cleaning and reconditioning of drums using caustic solutions and incineration. These operations produced spent solutions, incinerator ash and sludges. The storage of these waste products as well as the storage of drums awaiting reconditioning provided the potential for contamination at the site. BB&D is believed to have operated at this site since 1943.

MATERIALS:

A total of 701 drums were collected from the buildings and storage areas, sampled, overpacked and transported from the site for off site disposal. Seven (7) tanks have also been sampled, six have been emptied, deconed and their contents disposed of. Eighteen (18) waste streams were identified from the containerized wastes (drum & tank) found at the site. These include: organic solids, organic liquids, flammable liquids, flammable solids, chlorinated organic solids, chlorinated organic liquids, inorganic solids, low level PCB solids, PCB solids, oxidizers, corrosives, cyanide liquids, cyanide solids, oils and aqueous liquids.

Eight (8) ash piles (860 cubic yards) and surface soil from the furnace area (horizontal and vertical extent of contamination undefined) have been sampled. Analysis of samples collected from these matrices indicate the presence of metals, PCBs and dioxin.

Two of the piles contaminated with high levels of dioxin have been excavated and transported offsite for incineration.

THREATS:

Direct contact, fire, explosion, surface water contamination, surface and subsurface soil contamination and groundwater contamination. With the stabilization and disposal of the containerized wastes and two of the ash piles and by restricting access to the site the threats to human health and the environment have been reduced. Off-site disposal of the remaining ash piles and the assessment and remediation of soil contamination at the site remain tasks to be completed.

ACTIONS:

Under Phase I activities, all wastes were sampled and identified by hazard class, all drums were overpacked, building No. 2 ash and pit sludges were removed and secured in covered roll-offs,

REMOVAL ACTION FACT SHEET

exterior ash piles were covered, additional gates were installed and fence repairs made. In addition, 24 hour security was initiated and maintained at the site.

Under Phase II activities all drums and containers containing wastes, a total of 551 after consolidation, were removed from the site and transported to facilities for proper off-site disposal.

Seven hundred and seven (707) tons of whole and scrap tires were removed from the Site for recycling.

Thirty-eight thousand, sixty-nine (38,069) empty drums were inspected and shredded. Seven hundred and eighty-seven, 787 tons of scrap metal were generated from the shredding of drums. In addition, eight thousand one hundred and twenty (8,120) poly drums and liners were disposed of.

Two thousand four hundred and seventy-five (2,475) gallons of liquids collected from drums removed from the "empty" drum piles were removed by vacuum tanker and transported from the Site for disposal.

A total of six thousand nine hundred and thirty-nine (6,939) gallons of contaminated No. 2 fuel oil was removed from Tank No. 5 and transported from the site for disposal.

Two gas cylinders were recovered from the fire debris and taken by their owners for reuse.

An estimated six hundred (600) tons of ash (ash piles 1 and 2) contaminated with PCBs, dioxin and RCRA hazardous for lead and cadmium were removed from the site for incineration.

Three roll-off containers containing an estimated 63 tons of ash removed from Bldg. No. 2 and contaminated with low levels of PCBs, dioxin, and RCRA hazardous for lead and cadmium were transported from the Site for incineration.

PRESENT STATUS:

Presently, approximately 5,000 gallons of sludge in tank 6 remains on Site. The removal of this material will complete the removal activities planned for this second removal action.

11

Bayonne Barrel and Drum Site - Soil Investigation Report

Bayonne Barrel Participating Parties Group/de maximis, inc. Newark, New Jersey

March 1997



de maximis, inc.

186 Center Street Suite 290 Clinton, NJ 08809 (908) 735-9315 Fax (908) 735-2132

March 26, 1997

Joseph Cosentino USEPA Building 209, MS 211 2890 Woodbridge Ave. Edison, NJ 08837

Re: Bayonne Barrel and Drum Site - Soil Investigation Report

Dear Mr. Cosentino:

Enclosed please find three copies of the Bayonne Barrel and Drum Site Soil Investigation Report for your review. This document presents a summary of the recent soil investigation activities conducted at the site and the analytical results for the samples collected during the investigation. This document has been prepared in accordance with section 300.165 of the National Oil and Hazardous Substances Contingency Plan and fulfills the requirements of the Administrative Order on Consent for the Bayonne Barrel and Drum site dated October 1, 1996. Copies of the analytical data discussed in the report were submitted under a separate cover on March 14, 1997 for your review.

If you should have any questions regarding the Soil Investigation Report, please do not hesitate to contact me at (908) 735-9315.

Very truly yours,

de maximis, inc

Environmental Project Manager

cc: Bayonne Barrel Participating Parties Group

Michael J. McNally, P.E., Blasland, Bouck & Lee, Inc.

Bayonne Barrel and Drum Site - Soil Investigation Report

Bayonne Barrel Participating Parties Group/de maximis, inc. Newark, New Jersey

March 1997



8 South River Road Cranbury, NJ 08512-9502 (609) 860-0590

Executive Summary and Discussion of Findings Bayonne Barrel and Drum Site, Newark, NJ

Factors Favor Selection of a Capping Remedy at the Bayonne Barrel and Drum Site

polyaromatic hydrocarbons (PAHs), metals, polychlorinated biphenyls (PCBs) and polychlorinated dioxins/furans (PCDDs/PCDFs) were found at most of the sample locations throughout the site. Volatile organic compounds (VOCs) were also detected at a few locations, primarily in the Furnace Courtyard Area of the site. The horizontal and vertical distribution of the constituents suggest that many of the constituents may be associated with the historic fill material present at the site.

Based upon the results of the investigation and the anticipated future usage of the site, it appears that a remedy involving a low-permeability cap represents the most practical remedial alternative for the site. A cap remedy could be

In accordance with the Administrative Order on Consent, the Bayonne Barrel

and Drum Participating Parties Group recently completed an extensive soil

investigation program at the Bayonne Barrel and Drum site in Newark, New

Jersey. The results of this investigation show that several constituents are present in soils throughout most of the site. Generally, a combination

Elimination of Primary Exposure Routes and Prevention of Constituent Migration developed which is protective of human health and the environment, technically feasible, and compatible with beneficial reuse and future development of the site. The text below presents a conceptual overview of several of the factors which support selection of a cap as a practical and protective remedy for the site.

The primary constituents associated with the site are PCDDs/PCDFs, metals, PCBs, and PAHs. Because PCDDs/PCDFs and PCBs possess low volatility and water solubility, the potential routes of exposure for these constituents are through direct contact, inhalation or ingestion of the site soil or soil particles. Installation of a low-permeability cap in conjunction with a Declaration of

Environmental Restriction (DER) would effectively eliminate these potential exposure pathways by preventing direct contact with the soil and by eliminating any potential dust or erosion of soil particles. The cap remedy would also effectively preclude infiltration of rainwater through the site soil. This would further reduce potential transport of constituents from the site soil into ground

Since PCDDs/PCDFs and PCBs are generally immobile in the

In the short term, the risks associated with the site will be reduced by maintaining the existing institutional controls at the site. The site fence will be maintained to prevent access to the site by unauthorized personnel and prevent exposure to the site soils.

environment, a cap remedy would effectively encapsulate and contain these

Limited Soil Disturbance

Because the potential exposure pathways to the site constituents are associated with the soil or soil particles, disturbance of the soil increases the potential for exposure to or mobilization of site constituents. A cap remedy would minimize the amount of soil disturbance and potential constituent migration during the remediation activities. Most other remedial alternatives, including

constituents within the site.

Technical Feasibility

excavation and off-site disposal would require extensive soil excavation and handling, increasing the potential for mobilization of and exposure to site constituents. The presence of PCDDs/PCDFs, which have been found to pose a health risk at minute concentrations, make this a particularly important consideration for this site.

Incompatibility of Site Conditions and Constituents with Treatment and Disposal Options

The combination of constituents present at the site would make implementation of remedies other than a cap very difficult and expensive. As discussed previously, most of the constituents distributed throughout the site soils are relatively immobile in the environment. While this supports implementation of a cap remedy, the immobile and persistent nature of the constituents also makes on-site or in-situ treatment alternatives, which reduce the constituent concentrations, particularly difficult to implement. This is particularly true for PCDDs/PCDFs and PCBs since these constituents tend to adhere to soil particles. The presence of other constituents such as metals and PAHs further increases the difficulty of identifying a feasible on-site treatment technology.

Off-site treatment and disposal options would also be extremely expensive and difficult to implement due to the combination of compounds present in the soil and the volume of soil which would need to be addressed. Since the site occupies approximately 12 acres, each foot of soil would represent approximately 20,000 cubic yards of soil. Therefore, even a 5-foot cut would result in an extremely large volume of soil to be addressed and the presence of PCDDs/PCDFs and PCBs would result in very high unit disposal costs.

The shallow ground water at the site would further complicate on-site and offsite treatment and disposal alternatives. During the recent sampling activities ground water was encountered at depths as shallow as 3 feet below the land surface. Therefore, in order to excavate the impacted soil, large volumes of water would need to be managed or controlled. Ground-water control of this nature would be extremely difficult to accomplish and significantly increase the remediation costs.

Historic Fill Consideration

The origin of the site soil also favors implementation of a cap remedy. Because the area on and around the site was once a tidal wetland, most of the soil present at the site and surrounding properties consists of historic fill material. These fill materials include fill associated with a former City of Newark landfill and bottom ash from a power plant. Based upon the distribution of the site constituents, it appears that the historic fill materials, rather than site operations, are the source of many of the constituents at the site. Because the area surrounding the site also received similar fill materials, it is probable that many of the constituents detected at the site are present throughout the surrounding area.

Compatibility with Beneficial Reuse of the Site

Conclusions

In areas with widespread historic fill, engineering controls such as a cap are commonly employed to eliminate the need to disturb potentially widespread areas of impacted soil. This is recognized in the recently published NJDEP technical regulations (NJAC 7:26E) which establish a presumption that historic fill materials be contained on site in accordance with NJSA 58:10-12(h).

Implementation of a cap remedy would not only be compatible with the site constituents and conditions, but it would also be compatible with beneficial reuse of the site consistent with a "brown fields" type of approach. The location of the facility and the surrounding land use types, make this an ideal site to be redeveloped for industrial/commercial purposes. The site is located in a highly visible and easily accessible area of Newark. It is adjacent to several major roadways and is located close to New York and several major ports. A cap remedy could readily be developed which is compatible with commercial redevelopment of the site. A cap remedy could be designed to not only contain the site soils, but to support future reuse of the site for slab type construction.

A cap remedy would be protective of human health and the environment while optimizing the potential for future site development. The cap remedy would eliminate potential exposure routes associated with the site constituents while minimizing disturbance of the site soils. The cap remedy also eliminates the technical difficulties associated with the shallow ground water and the mixture of constituents present at the site. By providing a relatively low cost remedial alternative for the site, a cap remedy would be compatible with beneficial reuse scenarios for the site. Based upon these preliminary considerations, a cap remedy represents the most practical remedial alternative for the site.

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Figure.

Attachments.

1. Introduction

1.1 Purpose and Objectives

1.2 Site Description and History

1.3 Summary of Regulatory History This Soil Investigation Report has been prepared by Blasland, Bouck & Lee, Inc. (BBL) on behalf of the Bayonne Barrel Participating Parties Group (Group) for the Bayonne Barrel and Drum site (site) located in Newark, New Jersey. This report conforms to the requirements set forth in section 300.165 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), and presents a summary of the sampling activities conducted at the site, as well as the sampling results and an evaluation of the analytical data.

As outlined in the Administrative Order on Consent (AOC) for removal action for the site dated October 1, 1996 (Index No: II CERCLA-96-0109), the purpose of the Removal Action is to abate an imminent and substantial endangerment to the public health, welfare, or the environment that may be presented by the actual or threatened release of hazardous substances, pollutants, or contaminants at or from the site. The objective of the Removal Action is to plan and conduct an investigation to identify the nature and extent of constituents in soil at the site. The purpose of the Soil Investigation Report is to transmit the results of the Removal Action conducted at the site.

The site is located at 150 to 154 Raymond Boulevard in Newark, Essex County, New Jersey, and occupies approximately 15 acres of Block 5002, Lots 3 and 14. The site is bounded by Raymond Boulevard and an exit ramp from Routes 1 and 9 to the north and west, respectively; an entrance ramp to the New Jersey Furnpike to the east and south; and a movie theater parking lot to the southwest.

The site operated as a metal barrel and drum refurbishing facility from the early 1940s until the early 1980s when the operating entity, Bayonne Barrel & Drum Company, filed for bankruptcy under Chapter 11. When the facility was in operation, drum cleaning operations included both open and closed-head drums. Drums were washed with a caustic solution which was drained through an oil/water separator before being discharged to a 50,000 gallon underground storage tank (UST). The liquid was decanted from the tank into the sewer system. An incinerator was then used to clean the open head drums, and the incinerator residue was collected in two pits (approximately 14 feet deep) on either side of the incinerator.

Based on information contained in the AOC for the site, the United States Environmental Protection Agency (USEPA) site inspections conducted in 1984, 1988, and 1991 confirmed the presence of hazardous substances as defined by the Comprehensive Environmental Recovery, Conservation, and Liability Act (CERCLA), including volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and metals. In September 1991, the New Jersey Department of Environmental Protection (NJDEP) requested that USEPA evaluate the site for a CERCLA removal action. In January 1992, a Removal Site Evaluation (RSE) was completed, which concluded that CERCLA hazardous substances had been released into the environment. A Health Consultation conducted in conjunction with the RSE indicated that conditions at the site posed a potential public health threat.

In March 1993, USEPA conducted activities to remove material displaying the RCRA characteristic of ignitability that was contained in abandoned trailers. Following a fire at the site in July 1994, USEPA commenced additional site inspection/characterization and removal activities. Inspections at the site revealed ash piles, shredded tires, substances in vertical and underground storage tanks and within buildings, as well as approximately 45,000 drums. Some of the drums contained hazardous substances, and many of the drums containing these substances were open, deteriorated and/or improperly stored.

USEPA reports having performed several removal actions at the site, including:

- securing the site by repairing the perimeter fence and installing warning signs;
- removing approximately 46,000 drums;
- · testing, segregating, and overpacking of hazardous substances;
- removing two ash piles containing dioxins and lead; and
- · removing tanks containing sludge material.

USEPA also reports that recent sampling of site soils confirm the presence of VOCs, PCBs, and metals, as well as dioxins in soil. Based on the results of these sampling efforts, USEPA concluded that additional activities were required at the site to identify the extent of constituents in soil at the site.

1.4 Report Organization

This report is organized into the following sections:

- Section 2: Summary of Sampling Program (description of areas investigated, sampling methods for each area, and QA/QC sampling);
- Section 3: Data Review (evaluation of analytical data for each area investigated, and QA/QC samples, and a preliminary exposure assessment); and
- · Section 4: References.

2. Summary of Sampling Program

BBL conducted a soil sampling program from January 6 through 9, 1997 to investigate three areas of the site in accordance with the AOC. These areas included:

- the Furnace Courtyard Area (FCA);
- · the Storage Tank Area (STA); and
- · the Yard Area (YA).

All sampling was conducted in accordance with the November 1996 Sampling and Analysis Plan (SAP) (BBL 1996), the November 1996 Quality Assurance Project Plan (QAPP) (BBL 1996a), the NJDEP Field Sampling Procedures Manual (NJDEP 1992) and the Field Analysis Manual (NJDEP 1994).

This section presents a summary of the sampling activities and any modifications to the sampling procedures presented in the SAP (BBL 1996).

This section discusses the selection of sampling locations and depths for soil sample collection. Descriptions and field observations for the soil samples collected in the three areas are included in Attachment 1.

Figure 1 identifies the nine locations within the FCA where soil samples were collected. Sampling locations in the FCA were located in the field based on distances measured from existing site structures, such as buildings, fence posts, and utility poles, and documented in the field notebook. Descriptions and field observations for the soil samples collected in the FCA are included as Attachment 1.

As indicated in the SAP (BBL 1996) and on Figure 1, one surface sample (FCA-5) was located in one of the several below ground equipment pits in Building 2, and a second surface sample (FCA-1) was located at the specific location where the drum discharge conveyor entered the furnace. The seven remaining samples (FCA-2, FCA-2A, FCA-3, FCA-4, FCA-6, FCA-7, and FCA-8) were located in the courtyard surrounding the furnace. Based on the sampling plan, two samples were to be collected from each of these seven locations: one sample from the 2-foot interval immediately above the water table and one sample from the 2-foot interval representing the midpoint between the ground surface and the groundwater table. However, if the depth to ground water was shallow (less than 5 feet bgs), no midpoint sample was to be collected for analysis.

The table below indicates the sample depths and depths to ground water for each of the FCA samples:

Sample Location	Sample Depth Interval (feet bgs)	Depth to Ground Water (feet bgs)		
FCA-I	0 to 2	2		

2.1 Sampling Locations

2.1.1 Furnace Courtyard Area

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Sample Location	Sample Depth Interval (feet bgs)	Depth to Ground Water (feet bgs)
FCA-2	0 to 2	2
FCA-2A	0 to 2 and 2 to 4	2
FCA-3	1 to 3	3
FCA-4	1 to 3	3
FCA-5	0 to 1.5	2
FCA-6	0 to 2	2
FCA-7	0 to 2 and 2 to 4	2
FCA-8	2 to 4	4

As indicated on the table above, the depth to ground-water measurements for each of the seven sampling locations ranged from 2 to 4 feet bgs. Because ground water was shallow (less than 5 feet bgs), soil samples were only collected from the 2-foot interval immediately above the water table, in accordance with the SAP (BBL 1996), with the exception of sample locations FCA-2A and FCA-7. Two samples were collected from locations FCA-2A and FCA-7 because a colored sludge-like material was encountered at the 2- to 4-foot depth interval at these locations; while black and dark brown silt, sand, and gravel was encountered at this depth at the other five sample locations. Additionally, although ground water was encountered at 2 feet bgs at FCA-7, the bottom of the tank or pit was not encountered until 4 feet bgs.

A USEPA representative was on site for the soil sampling at the FCA on January 6, 1997, and indicated that:

- sampling location FCA-8 should be added to the FCA sampling;
- collecting only one soil sample at locations FCA-1, FCA-2, FCA-3, FCA-4, FCA-5, FCA-6, and FCA-8 was appropriate given the shallow depth to ground water; and
- one additional sample should be collected from below the ground water table at locations FCA-2A and FCA-7.

As indicated above, these modifications were incorporated into the FCA sampling program.

All FCA soil samples were analyzed for Target Compound List (TCL) VOCs, semivolatile organic compounds (SVOCs), PCBs, and Organochlorine Pesticides, Target Analyte List (TAL) metals, and polychlorinated dibenzo-p-dioxins/polychlorinated dibenzofurans (PCDDs/PCDFs). In accordance with the SAP (BBL 1996), the samples collected for VOC analysis were collected from the 0.5- to 2.0-foot depth interval. Samples collected from this interval were

2.1.2 Storage Tank Area

labeled as a 0- to 2-foot depth interval (e.g., FCA-1 (0-2)) on the Chain-of-Custody so that sample identifications would be consistent with the other analyses.

Figure I identifies the three locations within the STA where soil samples were collected. Sampling locations in the STA were located in the field based on distances measured from existing site structures, such as buildings, fence posts, and utility poles, and documented in the field notebook. Descriptions and field observations for the soil samples collected in the STA are included in Attachment 1.

Based on the SAP (BBL 1996), soil samples were to be collected from three depth intervals:

- one sample from the 0- to 2-foot interval representing surface soils;
- · one sample from the 2-foot interval immediately above the water table; and
- one sample from the 2-foot interval representing the midpoint between the ground surface and the ground-water table.

However, if the depth to ground water was shallow (less than 5 feet bgs), no midpoint sample was to be collected for analysis.

The table below indicates the sample depths and depths to ground water for each of the STA samples:

Sample Location	Sample Depth Interval (feet bgs)	Depth to Ground Water (feet bgs)
STA-1	0 to 2	2
STA-2	0 to 2	2
STA-3	1 to 3	3

As indicated in the above table, the depth to ground-water measurements for the three sampling locations ranged from 2 to 3 feet bgs. Because ground water was shallow (less than 5 feet), soil samples were only collected from the 2-foot interval immediately above the water table, in accordance with the SAP (BBL 1996). Based on the sampling depths listed above, these soil samples are also indicative of surface soil quality in the STA. All STA soil samples were analyzed for TCL VOCs, SVOCs, PCBs, and Organochlorine Pesticides, TAL metals, and PCDDs/PCDFs. In accordance with the SAP (BBL 1996), the samples collected for VOC analysis were collected from the 0.5- to 2.0-foot depth interval. Samples collected from this interval were labeled as a 0- to 2-foot depth interval (e.g., STA-1 (0-2)) on the Chain-of-Custody so that sample identifications would be consistent with the other analyses.

The SAP (BBL 1996) also indicated that an additional surface soil sample (0-to 2-foot depth interval) would be collected from the collection sump of the concrete trough, identified by the Bayonne Barrel and Drum Company as the oil/water separator. Lexon tubing was used to probe the entire length of the STA trench, and no sludge or sediment was identified. The only material found was a roofing material from the adjacent building. Therefore, a surface soil sample was not collected at this location.

2.1.3 Yard Area

Figure 1 identifies the 58 locations within the YA where soil samples were collected. Soil borings were installed at five locations (YA-1 through YA-5) to collect soil samples from three discrete depth intervals, and surface soil samples (0- to 2-foot depth interval) were collected from the remaining 53 locations (YA-6 through YA-58). The following sections discuss the YA soil borings and surface soil samples separately. Descriptions and field observations for the soil samples collected in the YA are included in Attachment 1.

2.1.3.1 Soil Borings

Soil borings were installed at five locations (YA-1 through YA-5), which were identified based on a grid established in the field. Based on the SAP (BBL 1996), soil samples were to be collected from these five borings from three depth intervals:

- · one sample from the 0- to 2-foot interval representing surface soils;
- . one sample from the 2-foot interval immediately above the water table; and
- one sample from the 2-foot interval representing the midpoint between the ground surface and the ground-water table.

The table below indicates the sample depths and depths to ground water for each of the YA borings:

Sample Location	Sampl	e Depth Inter	Depth to Ground Water (feet bgs)	
	Surface	Midpoint	Water Table	
YA-1	0 to 2	7 to 9	14 to 16	16
YA-2	0 to 2	4 to 6	8 to 10	10
YA-3	0 to 2	2 to 4	4 to 6	6
YA-4	0 to 2	3 to 5	6 to 8	8
YA-5	0 to 2	3 to 5	6 to 8	8

As indicated in the above table, the depth to ground-water measurements for the five sampling locations ranged from 6 to 16 feet bgs.

All soil samples from the YA borings were analyzed for TCL VOCs, SVOCs, PCBs and Organochlorine Pesticides, TAL metals, and PCDDs/PCDFs. In

accordance with the SAP (BBL 1996), the samples collected for VOC analysis were collected from the 0.5- to 2.0-foot depth interval. Samples collected from this interval were labeled as a 0- to 2-foot depth interval (e.g., YA-1 (0-2)) on the Chain-of-Custody so that sample identifications would be consistent with the other analyses.

2.1.3.2 Surface Soil Samples

Surface soil samples (0- to 2-foot depth interval) were collected from 53 sampling locations (YA-6 through YA-58), which were spatially distributed within the 11.5 acre Yard Area, and located based on a grid established in the field.

Surface soil samples collected from these locations were analyzed for PCBs, lead, and PCDDs/PCDFs.

2.2 Sampling Methods

Surface soil samples in the FCA, STA, and YA were collected using a decontaminated, stainless steel, hand auger. Any surface vegetation was removed prior to collecting the soil samples. At each location, the hand auger was advanced with a straight, vertical entry into the soil so as to secure a reasonably representative sample. The sampler containing the soil sample was placed on an aluminum or stainless steel tray, and the excess soil was removed from the outside of the sampler with a precleaned spatula to avoid cross contamination over the sample depth. The sample was then extruded onto a stainless steel tray. Sample increments were mixed thoroughly prior to filling the appropriate sample jars, with the exception of the VOC analysis jars, which were filled prior to homogenization.

Subsurface soil samples in the YA were collected using a Geoprobe sampling technique. Borings were installed by driving 1-inch diameter stainless steel rods into the ground using a truck-mounted percussion hammer and hydraulic jack. Soil samples were collected at discrete intervals and analyzed for the constituents listed in Section 2.1.3. Prior to submission to the laboratory, subsurface soil samples were screened with a photoionization detector (PID). Prior to use each day, the PID was calibrated using isobutylene in accordance with standard calibration procedures.

2.3 Decontamination

As indicated in the SAP (BBL 1996), cleaning of the reusable field sampling equipment (e.g., scoops, mixing bowls, spatulas) followed the decontamination procedures listed below:

- · wash with non-phosphate detergent and distilled water;
- · rinse with tap water;
- · rinse with distilled water:
- · allow to air dry; and
- wrap in aluminum foil.

Sampling equipment was decontaminated prior to use at each sampling location, and decontamination rinsate was collected in plastic containers that were transported to each sampling location.

Large sampling equipment such as drill rigs, auger flights, drill rods, and drill bits, were decontaminated by washing with a high pressure wash. Particulate matter was removed with a brush as needed. Large sampling devices were cleaned prior to mobilizing to the site, after mobilizing to the site, between each sampling location, and prior to leaving the site.

Quality Assurance/Quality Control (QA/QC) sampling included collection and analysis of two equipment rinse blanks, five blind duplicate samples (one per 20 samples), and five matrix spike (MS) and five matrix spike duplicate (MSD) samples (one MS/MSD set per 20 samples).

The two equipment rinse blanks were collected during the surface soil sampling in the YA on January 8 and 9, 1997, and were analyzed for lead, PCBs, and PCDD/PCDFs based on the soil sample analyses. Rinse blanks were not collected for the Geoprobe sampling conducted at the FCA, STA, and YA boring locations on January 6 and 7, 1997 because dedicated sampling equipment was used to collect each sample.

The five blind duplicate samples were collected from the following locations and analyzed for the indicated parameters:

Sample ID	Sample Location	Sample Depth	Parameters
BBD-D1	YA-l	7 to 9 feet	VOCs, SVOCs, Pesticides, PCBs, Metals, PCDD/PCDF
BBD-D2	YA-3	0 to 2 feet	VOCs, SVOCs, Pesticides, PCBs, Metals, PCDD/PCDF
BBD-D3	YA-13	0 to 2 feet	PCBs, Lead, PCDD/PCDF
BBD-D4	YA-56	0 to 2 feet	PCBs, Lead, PCDD/PCDF
BBD-D5	YA-57	0 to 2 feet	PCBs, Lead, PCDD/PCDF

Additional sample volume for the MS and MSD samples was collected from the following locations:

- YA-2 (4 to 6 feet);
- YA-4 (3 to 5 feet);
- YA-29 (0 to 2 feet);
- YA-52 (0 to 2 feet); and
- YA-58 (0 to 2 feet).

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2.4 QA/QC Sampling

3. Data Review

Tables I through 4 summarize the analytical data for the FCA, STA, YA soil borings, and YA surface soil samples, respectively. This section presents a review of the analytical data, which was conducted to identify detections of constituents in the three areas. Detections of VOCs, SVOCs, Pesticides, and PCBs were evaluated based on concentration range and frequency of detection. Metals were identified based on comparison of detected concentrations to typical background concentrations for metals in urban soils in New Jersey (Fields et al 1987). These typical background concentrations are as follows:

Metal	Typical Background Range (mg/kg)	Metal	Typical Background Range (mg/kg)
Aluminum	Not Available	Lead	25.8 - 617
Antimony	<0.02 - 0.69	Manganese	30 - 952
Arsenic	0.34 - 48.9	Mercury	<0.01 - 2.71
Barium	Not Available	Nickel	5.5 - 53.8
Beryllium	0.16 - 35.9	Selenium	<0.01 - 0.15
Cadmium	0.16 - 2.36	Silver	0.04 - 1.53
Chromium	4.9 - 24.6	Thailium	<0.06 - 0.46
Cobalt	Not Available	Vanadium	1.0 - 46.1
Copper	8.84 - 143	Zinc	40.4 - 317

Concentrations of calcium, iron, magnesium, potassium, and sodium were excluded from the evaluation because these are non-toxic, essential elements.

Detected concentrations of dioxins/dibenzofurans were evaluated based on total TCDD equivalents, per the 1989 Update to the Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) (USEPA 1989). According to this method, a set of derived Toxicity Equivalency Factors (TEFs) is used to convert the concentration of any CDD/CDF congener into an equivalent concentration of 2,3,7,8-TCDD. The Total TCDD equivalents for a sample was calculated as the sum of each detected concentration multiplied by its TEF as follows:

TEFs for the CDD/CDF congeners detected at the site are as follows:

CDD/CDF Congener	TEF
2,3,7,8-TCDD	1.0

CDD/CDF Congener	TEF
1,2,3,7,8-PeCDD	0.5
1,2,3,4,7,8-HxCDD	0,1
1,2,3,6,7,8-HxCDD	1.0
1,2,3,7,8,9-HxCDD	0.1
1,2,3,4,6,7,8-HpCDD	0.01
1,2,3,4,6,7,8,9-OCDD	0.001
2,3,7,8-TCDF	0.1
1,2,3,7,8-PeCDF	0.05
2,3,4,7,8-PeCDF	0.5
1,2,3,4,7,8-HxCDF	0.1
1,2,3,6,7,8-HxCDF	0.1
2,3,4,6,7,8-HxCDF	0.1
1,2,3,7,8,9-HxCDF	0.1
1,2,3,4,6,7,8-HpCDF	0.01
1,2,3,4,7,8,9-HpCDF	0.01
1,2,3,4,6,7,8,9-OCDF	0.001

3.1 Furnace Courtyard Area

3.1.1 Field Screening

This section presents the results of the field screening and the laboratory analysis for the FCA soil samples.

As indicated in Section 2.2, soil samples from the FCA were screened using a PID prior to submission to the laboratory. PID readings for these soil samples are as follows:

Depth Interval PID Reading (ppm)									
1	FCA-1	FCA-2	FCA-2A	FCA-3	FCA-4	FCA-5	FCA-6	FCA-7	FCA-8
0 to 2	100	250	200	30	20	260	20	300	80
2 to 4	797	50	220	150	80	180	5	200	120
4 to 6	l'a	20	4	H	5		35	Ceri	4

[&]quot;-" No PID reading; ground water encountered

As shown in this table, the highest PID readings were identified in the top 4 feet of soil with minimal readings in the 4- to 6-foot depth interval.

3.1.2 Analytical Results

Analytical results for VOCs, SVOCs, Pesticides/PCBs, metals, and dioxins/

dibenzofurans in the FCA soil samples are presented in Tables 1A, 1B, 1C, 1D, and 1E, respectively. Highlights of these results are as follows:

- Ethylbenzene, toluene, and xylenes were the most frequently detected VOCs:
 - ethylbenzene (3 ug/kg to 1,300,000 ug/kg);
 - toluene (3 ug/kg to 11,000,000 ug/kg); and
 - xylenes (not detected to 5,400,000 ug/kg).

Detected concentrations of these three VOCs were relatively higher than other VOCs. Other VOCs detected less frequently included 4-methyl-2-pentanone, methylene chloride, styrene, tetrachloroethene, 1,1,1-trichloroethane, and trichloroethene.

- As indicated in Table 1B, the SVOCs most frequently detected at the relatively highest concentrations were:
 - Phthalates
 - di-n-butyl phthalate (1,400 ug/kg to 580,000 ug/kg);
 - di-n-octyl phthalate (not detected to 55,000 ug/kg)
 - butylbenzyl phthalate (2,000 ug/kg to 330,000 ug/kg); and
 - bis(2-ethylhexyl)phthalate (12,000 ug/kg to 1,500,000 ug/kg).
 - Phenols
 - phenol (330 ug/kg to 190,000 ug/kg);
 - 2-methylphenol (not detected to 37,000 ug/kg); and
 - 4-methylphenol (not detected to 840,000 ug/kg).
 - PAHs (up to 84,000 ug/kg).
- As indicated in Table 1C, the organochlorine pesticides detected at the highest concentrations were:
 - 4,4'-DDE (not detected to 6,400 ug/kg);
 - 4,4'-DDD (not detected to 1,400 ug/kg);
 - alpha-Chlordane (not detected to 1,200 ug/kg); and
 - gamma-Chlordane (not detected to 1,300 ug/kg).
- Three PCB mixtures were detected (Aroclors 1248, 1254, and 1260), and concentrations ranged as follows:
 - Aroclor-1248 (not detected to 140,000 ug/kg);

- Aroclor-1254 (not detected to 430,000 ug/kg); and
- Aroclor 1260 (not detected to 16,000 ug/kg).
- Detected concentrations of metals were compared to typical background concentrations for metals in urban soils in New Jersey (Fields et al 1987).
 Metals detected in multiple samples at elevated concentrations relative to these background concentrations included the following:

Metal	Range of Typical Background Concentrations (mg/kg)	Range of Detected Concentrations (mg/kg)	
Antimony	<0.02 - 0.69	26.7 - 231	
Cadmium	0.16 - 2.36	not detected - 143	
Chromium	4.9 - 24.6	201 - 31,100	
Copper	8.84 - 143	349 - 1,970	
Lead	25.8 - 617	1,390 - 172,000	
Manganese	30 - 952	269 - 4,470	
Mercury	<0.01 - 2.71	0.349 - 43.9	
Nickel	5.5 - 53.8	45.6 - 1,050	
Selenium	<0.01 - 0.15	not detected - 56.3	
Silver	0.04 - 1.53	not detected - 56.7	
Zinc	40.4 - 317	646 - 5,740	

Additionally, two detections of arsenic (52.9 mg/kg and 50.3 mg/kg) were also elevated relative to the range of typical background concentrations (0.34 mg/kg to 48.9 mg/kg)

 Detected PCDD/PCDF congeners consisted predominantly of hepta- and octa- chlorinated dibenzodioxins and furans. Based on the total TCDD equivalents calculated per USEPA (1989), the total TCDD equivalents ranged from 0.0014 ug/kg to 1.76 mg/kg, as shown in Table 1E.

This section presents the results of the field screening and the laboratory analysis for the STA soil samples.

As indicated in Section 2.2, soil samples from the STA were screened using a PID prior to submission to the laboratory. PID readings for these soil samples are as follows:

Depth Interval		PID Reading (ppm)
	STA-1	STA-2	STA-3

3.2 Storage Tank Area

3.2.1 Field Screening

Depth Interval	1 0 10 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PID Reading (ppm)		
0 to 2	25	120	70	
2 to 4	6	10	100	
4 to 6		15		

[&]quot;-" No PID reading collected; ground water encountered

As indicated in the above table, the highest PID readings were identified in the top 4 feet of soil with minimal readings in the 4- to 6-foot depth interval. These readings are of similar magnitude to those detected in the FCA soil samples.

Analytical results for VOCs, SVOCs, Pesticides/PCBs, metals, and dioxins/dibenzofurans in the STA soil samples are presented in Tables 2A, 2B, 2C, 2D, and 2E, respectively. Highlights of these results are as follows:

- The highest detected concentrations of VOCs were detected in sample STA-3, and included the following:
 - benzene (2,400 ug/kg);
 - chlorobenzene (2,800 ug/kg);
 - ethylbenzene (5,700 ug/kg);
 - toluene (3,900 ug/kg); and
 - xylenes (19,000 ug/kg).

VOCs were detected at substantially lower concentrations in samples STA-1 and STA-2, as indicated in Table 2A.

- As indicated in Table 2B, the SVOCs detected most frequently and at the highest relative concentrations were:
 - Phthalates
 - di-n-butyl phthalate (310 ug/kg to 570,000 ug/kg); and
 - bis(2-ethylhexyl)phthalate (14,000 ug/kg to 37,000 ug/kg).
 - PAHs
 - benzo(a)pyrene (780 ug/kg to 1,300 ug/kg);
 - benzo(b)fluoranthene (1,200 ug/kg to 1,600 ug/kg);
 - chrysene (810 ug/kg to 2,000 ug/kg);
 - fluoranthene (1,400 ug/kg to 3,800 ug/kg);
 - naphthalene (1,300 ug/kg to 4,100 ug/kg);
 - phenanthrene (2,400 ug/kg to 4,400 ug/kg); and
 - pyrene (1,200 ug/kg to 3,600 ug/kg).

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3.2.2 Analytical Results

- As indicated in Table 2C, the organochlorine pesticides detected at the highest concentrations were:
 - Aldrin (not detected to 1,400 ug/kg);
 - 4,4'-DDE (350 ug/kg to 1,400 ug/kg);
 - 4,4'-DDD (480 ug/kg to 860 ug/kg); and
 - alpha-Chlordane (320 ug/kg to 730 ug/kg).
- Two PCB mixtures were detected (Aroclors 1248 and 1260), and concentrations ranged as follows:
 - Aroclor-1248 (13,000 ug/kg to 14,000 ug/kg); and
 - Aroclor 1260 (5,300 ug/kg to 6,800 ug/kg).
- Detected concentrations of metals were compared to typical background concentrations for metals in urban soils in New Jersey (Fields 1987).
 Metals detected in multiple samples at elevated concentrations relative to these background concentrations included the following:

Metal	Typical Background Concentration Range (mg/kg)	Range of Detected Concentrations (mg/kg)		
Antimony	<0.02 - 0.69	3.93 - 29.6		
Cadmium	0.16 - 2.36	6.16 - 406		
Chromium	4.9 - 24.6	72.3 - 1,490		
Copper	8.84 - 143	138 - 564		
Lead	25.8 - 617	545 - 21,300		
Nickel	5.5 - 53.8	48.2 - 61.3		
Selenium	<0.01 - 0.15	1.37 - 35.4		
Thallium	<0.06 - 0.46	1.11 - 4.02		
Zinc	40.4 - 317	437 - 11,200		

Additionally, one detection of silver (2.39 mg/kg) was elevated relative to the background concentration range (0.04 mg/kg to 1.53 mg/kg).

Detections of PCDD/PCDF congeners consisted of hepta- and octa- CDDs and tetra-, penta-, hexa-, hepta- and octa-CDFs. Based on the TCDD equivalents calculated per USEPA (1989), the total TCDD equivalents ranged from 1.09 ug/kg to 2.85 mg/kg, as shown in Table 2E.

3.3 Yard Area Soil Borings

3.3.1 Field Screening

This section presents the results of the field screening and the laboratory analysis for the YA soil boring samples.

As indicated in Section 2.2, soil samples from the YA borings were screened using a PID prior to submission to the laboratory. PID readings for these soil samples are as follows:

Depth Interval	PID Reading (ppm)						
	YA-1	YA-2	YA-3	YA-4	YA-5		
0 to 2	1.2	1.6	10.2	0.1	3.6		
2 to 4	3.6	0.2	6.8	0.8	2.4		
4 to 6	4.0	0.2	2.8	18	1.8		
6 to 8	2.8	0.4	1.8	16	0.8		
8 to 10	3.0	0.6	100	10	-		
10 to 12	3.2	1.0	1.00	E .	14		
12 to 14	0.6	290.1	i i i i i i i i i i i i i i i i i i i	200	Lin		
14 to 16	1.2	- 0-7		- 13-1	-		
16 to 18	0.8		-		-,-		

[&]quot;-" No PID reading collected; ground water encountered.

As indicated in the above table, the highest PID readings were identified in the 4- to 10-foot depth interval, with minimal readings in the 0-to 4- foot and 10- to 18-foot depth intervals. It is worthy of note that these readings are approximately one order of magnitude lower than the PID readings for the FCA and STA soil samples.

3.3.2 Analytical Results

Analytical results for VOCs, SVOCs, Pesticides/PCBs, metals, and dioxins/dibenzofurans in the YA soil boring samples are presented in Tables 3A, 3B, 3C, 3D, and 3E, respectively. Highlights of these results are as follows?

- VOC concentrations in the YA soils were substantially less than those reported in samples from the FCA and the STA. The highest most frequently detected VOCs were:
 - acetone (not detected to 230 ug/kg); and
 - toluene (not detected to 19 ug/kg).

Other VOCs were detected less frequently and at lesser concentrations, as indicated in Table 3A.

- As indicated in Table 3B, the SVOCs detected most frequently and at the
 relatively highest concentrations were primarily PAHs (concentrations up
 to 51,000 ug/kg), with fewer elevated detections of bis(2ethylhexyl)phthalate (37 ug/kg to 14,000 ug/kg) and di-n-butyl phthalate
 (not detected to 3,900 ug/kg).
- As indicated in Table 3C, the highest detected concentrations of organochlorine pesticides were detected in samples YA-3 (0-2) and YA-3 (2-4), and include the following:
 - 4,4'-DDE (380 ug/kg and 460 ug/kg);
 - Endosulfan II (1,100 ug/kg and 1,200 ug/kg); and
 - 4,4'-DDD (840 ug/kg and 830 ug/kg).
- Two PCB mixtures were detected (Aroclors 1248 and 1260), and concentrations ranged as follows:
 - Aroclor-1248 (not detected to 220,000 ug/kg); and
 - Aroclor 1260 (not detected to 11,000 ug/kg).
- Detected concentrations of metals were compared to typical background concentrations for metals in urban soils in New Jersey (Fields et al 1987).
 Metals detected in multiple samples at elevated concentrations relative to these background concentrations included the following:

Metal	Typical Background Concentration (mg/kg)	Range of Detected Concentrations (mg/kg)		
Antimony	<0.02 - 0.69	not detected - 70.9		
Arsenic	0.34 - 48.9	2.46 - 121		
Cadmium	0.16 - 2.36	not detected - 85.5		
Chromium	4.9 - 24.6	14.5 - 455		
Copper	8.84 - 143	11.3 - 1,870		
Lead	25.8 - 617	78.1 - 4,780		
Mercury	<0.01 - 2.71	not detected - 7.11		
Nickel	5.5 - 53.8	8.29 - 950		
Selenium	<0.01 - 0.15	not detected - 43.4		
Silver	0.04 - 1.53	not detected - 8.87		
Thallium	<0.06 - 0.46	not detected - 2.12		

Metal	Typical Background Concentration (mg/kg)	Range of Detected Concentrations (mg/kg)		
Zinc	40.4 - 317	97.4 - 11,700		

Detections of PCDD/PCDF congeners consisted of hepta- and octa-CDDs and tetra-, penta-, hexa-, hepta-, and octa-CDFs. Based on the total TCDD equivalents calculated per USEPA(1989), the total TCDD equivalents ranged from 0 ug/kg (no dioxins or dibenzofurans detected) to 212.29 mg/kg, as shown in Table 3E.

3.4 Yard Area Surface Soil Samples

3.4.1 Field Screening

This section presents the results of the field screening and the laboratory analysis for the YA surface soil samples.

As indicated in Section 2.2, the YA surface soil samples were screened using a PID prior to submission to the laboratory. PID readings for these soil samples are as follows:

ID	PID (ppm)	ID.	PID (ppm)	ID	PID (ppm)
YA-6	0.2	YA-2	4 0.6	YA-42	7.0
YA-7	130	YA-2	5 1.0	YA-43	65
YA-8	2.4	YA-2	6 0.0	YA-44	0.0
YA-9	0.1	YA-2	7 28	YA-45	0.1
YA-10	4.0	YA-2	8 0.4	YA-46	1,6
YA-11	0.0	YA-2	9 20.0	YA-47	0.1
YA-12	0.2	YA-3	0 4.0	YA-48	15.4
YA-13	2.0	YA-3	1 0.6	YA-49	3.0
YA-14	1.6	YA-3	2 0.0	YA-50	84
YA-15	0.2	YA-3	3 0.5	YA-51	12.4
YA-16	2.0	YA-3	4 0.0	YA-52	0.0
YA-17	0.1	YA-3	5 1.0	YA-53	210
YA-18	0.1	YA-3	6 0.6	YA-54	300
YA-19	0.0	YA-3	7 2.8	YA-55	22.0
YA-20	0.0	YA-3	8 8.6	YA-56	0.2
YA-21	0.8	YA-3	9 14.8	YA-57	0.1
YA-22	0.4	YA-4	0 22	YA-58	26.0
YA-23	1.2	YA-4	54.0		

As indicated in the above table, the PID readings for the YA surface soil

3.4.2 Analytical Results

samples ranged from 0.0 ppm to 300 ppm. These values are similar to those detected for samples collected from the YA soil borings with the exception of readings from samples YA-7 (130 ppm), YA-53 (210 ppm), and YA-54 (300 ppm).

Analytical results for PCBs/Lead, and dioxins/dibenzofurans in the YA surface soil samples are presented in Tables 4A and 4B, respectively. Highlights of these results are as follows:

- As indicated in Table 4A, two PCB mixtures were detected (Aroclors 1248 and 1260), and concentrations ranged as follows:
 - Aroclor-1248 (not detected to 3,400,000 ug/kg); and
 - Aroclor 1260 (390 mg/kg to 120,000 ug/kg).
- As indicated in Table 4A, detected concentrations of lead ranged from 116 mg/kg to 198,000 mg/kg. Forty-four of the 53 detections (83 percent) were greater than the maximum typical background concentration of lead in urban soils in New Jersey (617 mg/kg).
- All congeners of PCDD/PCDF analyzed were detected. Based on the total TCDD equivalents calculated per USEPA(1989), the total TCDD equivalents ranged from 0.02 ug/kg to 911.01 ug/kg, as shown in Table 4B.

3.5 QA/QC Sample Results

QA/QC samples were evaluated based on the analytical results for the equipment rinse blanks and the laboratory method blanks, and the conformance/nonconformance summaries provided in the data packages.

Constituents were not detected in equipment rinse blanks as indicated in Table 5. Constituents detected in the laboratory method blanks include the following:

- Three PAHs [phenanthrene (3,200 ug/kg), fluoranthene (2,600 ug/kg), and pyrene (2,500 ug/kg)] detected in the laboratory method blank (SBLK8877) associated with sample FCA-5. The concentrations detected in the laboratory method blank were one to two orders of magnitude less than the concentrations detected in sample FCA-5 (150,000 ug/kg, 61,000 ug/kg, and 38,000 ug/kg, respectively). Based on these concentrations, the laboratory concluded that the concentrations in the blank were not contributing to the concentrations in the sample, and the sample was not reanalyzed.
- Four phenols [2,4-dimethylphenol (34J ug/kg), 4-chloro-3-methylphenol (42J ug/kg), 2,4,6-trichlorophenol (36J ug/kg), and 4-nitrophenol (33J ug/kg)] were detected in one (SBLK8816) of the four laboratory method blanks associated with the STA and YA soil boring samples. None of the four phenols were detected in the STA and YA soil boring samples.

The laboratory conformance summaries in the data packages indicate the following with regard to the usability of the analytical data:

VOCs

- One surrogate recovery and one internal standard area were outside of QC limits for sample STA-1 (0-2) due to matrix interference. The laboratory indicated that this interference may cause the reported VOC concentrations for this sample to be higher or lower than the concentrations actually in the sample. It is worthy of note that VOCs detected in sample STA-1 (0-2) were limited to low-level concentrations of acetone (15 ug/kg) and toluene (7 ug/kg).
- The recoveries for benzene and chlorobenzene exceeded the Relative Percent Difference (RPD) limits in the medium level batch MS/MSD samples associated with the STA and YA soil boring samples. The laboratory indicated that the precision of the benzene and chlorobenzene concentrations reported for these samples may be questionable. It is worthy of note that benzene and chlorobenzene were only detected in the following STA and YA soil boring samples:

Sample ID	Benzene Concentration (ug/kg)	Chlorobenzene Concentration (ug/kg		
STA-2 (0-2)	2701	430		
STA-3 (1-3)	2,400	2,800		
YA-3 (0-2)	3J*	ND		
YA-3 (2-4) 12		ND		
YA-3 (4-6)	22	ND		

[&]quot;J" - estimated concentration below the detection limit.

SVOCs

• Sample YA-5 (3-5) contained a detection of benzo(b)fluoranthene (7,200 ug/kg) that exceeded the instrument calibration range ("E" qualified). In this situation, the laboratory would usually reanalyze the sample at a higher dilution factor. However, the laboratory did not reanalyze sample YA-5 (3-5) because the detected concentration was close to the upper end of the calibration range, and reanalysis at a higher dilution would not provide more accurate results. Therefore, the actual concentration of benzo(b)fluoranthene in sample YA-5 (3-5) may be higher or lower than the reported detection of 7,200 ug/kg.

3.6 Summary

Based on the data review, the following comments have been developed regarding constituents and soil quality.

 VOCs were detected in samples from all three areas. The largest number and highest concentrations of VOCs were detected in the FCA soil samples,

^{*} Average of samples YA-3 (0-2) and blind duplicate sample BBD-D2. ND - Not Detected

- and may be related to the operations conducted in this area. VOC concentrations in the YA soil boring samples were substantially less than those in the FCA and STA surface soil samples;
- PAHs and phthalates were the SVOCs most frequently detected in all three areas. Concentrations of PAHs detected in the soil samples were comparable for the three areas, and concentrations of phthalates were slightly lower in the YA soil boring samples than the surface soil samples from the FCA and the STA;
- A number of metals were detected at concentrations above typical background concentrations for urban soils in New Jersey. The ranges of detected concentrations were similar for the three areas, spanning several orders of magnitude within each area. The ranges of detected concentrations were also similar between the surface soil from the FCA and STA, and the subsurface soil from the YA soil borings;
- Three PCB mixtures (Aroclor-1248, 1254, and 1260) were detected in the soil samples. Aroclor-1254 was only detected in the FCA soil samples, and Aroclors-1248 and 1260 were detected in soil samples from all three areas. Concentrations of Aroclor-1248 were lowest in the STA surface soil samples, and highest in the YA soil boring samples. Concentrations of Aroclor-1260 were comparable among the three areas.
- PCDD/PCDF congeners detected in the FCA and STA were primarily hepta and octa CDD and all the CDFs. The YA soil samples contained detections of all the CDD/CDF congeners for which the samples were analyzed. The YA surface soil and soil boring samples contained the highest total TCDD equivalents, which were greater than the total TCDD equivalents in the FCA and STA surface soil samples by two orders of magnitude.
- Metals, phthalates, and several products of incomplete combustion (e.g., PAHs, dioxins, and furans) were distributed throughout the soil both vertically and horizontally. Based on the distribution of constituents at the site, it appears that historic fill materials, rather than the site operations, may be the source of many of the constituents detected at the site. Since the area was once a tidal wetland, the site soils consist primarily of historical fill material in the form of bottom ash, which was used to develop the site and the surrounding areas. Additionally, a portion of the Newark landfill exists within the property boundaries.

4. References

BBL. 1996. Sampling and Analysis Plan. Prepared for the Bayonne Barrel and Drum site, Newark, New Jersey.

BBL 1996a. Quality Assurance Project Plan. Prepared for the Bayonne Barrel and Drum site, Newark, New Jersey.

Fields, T.W, T.F. McNevin, R.A. Harkov, and J.V. Hunter. 1987. A Summary of Selected Soil Constituents and Contaminants at Background Locations in New Jersey. NJDEP Site Remediation Program and the Department of Environmental Sciences, Rutgers University.

NJDEP. 1992. Field Sampling Procedures Manual.

NJDEP. 1994. Field Analysis Manual.

USEPA. 1989. Update to the Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs). Risk Assessment Forum.

Data and Sample Qualifiers for Tables 1 through 5 Bayonne Barrel and Drum Site Newark, New Jersey

QUALIFIER DEFINITION

DATA QUALIFIERS - ORGANICS ANALYSES

- U Indicates that the compound was analyzed for but not detected.
 (NOTE: Value indicates detection limit for compound)
- J This qualifier indicates an estimated concentration.
- B This qualifier is used when the analyte is found in a method blank as well as the sample.
- E Exceeds calibration range.
- D This qualifier indicates all compounds identified in an analysis at a secondary dilution.

DATA QUALIFIERS - INORGANICS ANALYSES

- U Result is below the Method Detection Limit (MDL).
 (NOTE: Value indicates detection limit for compound)
- B Result is between the MDL and the Reporting Limit (RL).

SAMPLE QUALIFIERS

- DL Indicates that the analysis was performed at a secondary dilution.
- RE Rerun Indicates that the analysis is a reinjection or a reextraction and reanalysis, usually due to a failed QC element in the initial analysis.

TABLE 1 FURNACE COURTYARD AREA SOIL SAMPLES Table 1A
Analytical Results - Volatile Organic Compounds
Furnace Courtyard Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix Sample Depth (feet below ground surface)		01/06/97 01/06/97 Soil Soil	FCA2A 0-2 70094005 01/06/97 Soil (0.5-2)	FCA2A 0-2DL 70094005DL 01/06/97	FCA2A 2-4 70094006 01/06/97 Soil (2-4)	FCA-3 70092002 01/06/97 Soil (1-3)	
PARAMETERS	UNITS	1					
VOLATILES				170 - 50 - 10		No. of the last of	
Chlorobenzene Ethylbenzene	UG/KG UG/KG	27000	33000 U 130000	260000 U 1300000	530000 U 1200000 D	180000 U 900000	1200 J 19000
4-Methyl-2-Pentanone	UG/KG		63000 U	800000	760000 JD	520000	2700 (1
Methylene chloride	UG/KG	4400 U	33000 U	260000 U	530000 U	180000 U	1400 U
Styrene	UG/KG	4400 U	33000 U	260000 U	530000 U	180000 U	1400 U
1,1,2,2-Tetrachloroethane	UG/KG	4400 U	33000 U	260000 U	530000 U	180000 U	1200 J
Tetrachloroethene	UG/KG	2900 J	33000 U	260000 U	530000 U	180000 U	1400 U
Toluene	UG/KG	160000	620000	14000000 E	11000000 D	7600000	23000
1,1,1-Trichloroethane	UG/KG	4400 U	33000 U	260000 U	530000 U	180000 U	1400 U
Trichloroethylene Xylenes (Total)	UG/KG UG/KG	4400 U 110000	33000 U 420000	260000 U 5400000	530000 U 4900000 D	180000 U 3800000	1400 U 67000

Table 1A (cont.)

Analytical Results - Volatile Organic Compounds
Furnace Courtyard Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix Sample Depth (feet below ground s		FCA-4 70092003 01/06/97 Soil (1-3)	FCA5(0-1.5) 70141015 01/09/97 Soil (0-1.5)	FCA-6 70092004 01/06/97 Soil (0.5-2)	FCA7 0-2 70094001 01/06/97 Soil (0.5-2)	FCA7 2-4 70094002 01/06/97 Soil (2-4)	FCA-8 2-4 70094004 01/06/97 Soil (2-4)
PARAMETERS	UNITS						
VOLATILES		17					
Chlorobenzene	UG/KG	620 J	190000 U	6 U	15000 U	190000 U	760 U
Ethylbenzene	UG/KG	6600	940000	3 J	420000	1100000	2900
4-Methyl-2-Pentanone	UG/KG	1500 U	370000 U	12 U	30000 U	360000 U	1500 U
Methylene Chloride	UG/KG	780 U	190000 U	6 U	15000 11	190000	760 11
Styrene	UG/KG	780 U	1200000	6 U	15000 U	190000 13	760 11
1,1,2,2-Tetrachloroethane	UG/KG	780 U	190000 U	6 U	15000 U	190000 U	760 U
Tetrachloroethene	UG/KG	780 U	230000	6 U	15000 U	190000 U	760 U
Toluene	UG/KG	10000	7000000	3 J	56000	4800000	20000
1,1,1-Trichloroethane	UG/KG	780 U	880000	6 U	15000 U	190000 U	760 U
Trichloroethylene	UG/KG	780 U	300000	6 U	15000 U	120000 J	760 U
Xylenes (Total)	UG/KG	22000	3800000	6 U	1700000	4700000	17000

Table 1B

Analytical Results - Semivolatile Organic Compounds
Furnace Courtyard Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blusland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix Sample Depth (feet below ground surface)		FCA-I 0-2 70094003 01/06/97 Soil (0-2)	FCA-1 0-2DL 70094003DL 01/06/97 Soil (0-2)	FCA-2 70092001 01/06/97 Soil (0-2)	FCA-2DL 70092001DL 01/06/97	FCA2A 0-2 70094005 01/06/97 Soil (0-2)	FCA2A 0-2D 70094005DL 01/06/97 Soil (0-2)
PARAMETERS	UNITS					17	
SEMI-VOLATILES	7 17		444				
Phenol	UG/KG	14000 U	70000 U	9000	9700 113	6100 J	11000 11
1,3-Dichlorobenzene	UG/KG	4200 U	21000 U	660 U	13000 U	6400 1)	32000 1
1,4-Dichlorobenzene	UG/KG	4200 U	21000 U	480 J	13000 U	6400 U	32000 U
1,2-Dichlorobenzene	UG/KG	4200 U	21000 U	2000	13000 LI	6400 U	32000 11
2-Methylphenol	UG/KG	14000 U	70000 U	1500 1	43000 U	21000 11	110000 U
4-Methylphenol	UG/KG	14000 U	70000 U	6000	6400 113	21000 t)	110000 (1
Isophorone	UG/KG	4200 U	21000 U	690	13000 U	53000	57000 13
2,4-Dimethylphenol	UG/KG	14000 U	70000 U	2200 U	43000 U	21000 U	110000 1
2,4-Dichlorophenol	UG/KG	14000 U	70000 U	2200 U	43000 U	21000 11	110000 U
1,2,4-Trichlorobenzene	UG/KG	4200 U	21000 U	7300	8300 JD	6400 11	32000 U
Naphthalene	UG/KG	6200	21000 U	20000	28000 12	100000	110000 1
2-Methylnaphthalene	UG/KG	2900 J	21000 U	6400	7600 /10	18000	18000 J
2,4,5-Trichlorophenol	UG/KG	70000 U	350000 U	11000 U	220000 U	110000 U	530000 L
Dimethylphthalate	UG/KG	4200 U	21000 U	660 U	13000 U	6400 U	32000 t
Acenaphthylene	UG/KG	1800 J	21000 U	1000	13000 U	3000 J	32000 L
Acenaphthene	UG/KG	1500 J	21000 U	1600	13000 U	6400 U	32000 L
Dibenzofuran	UG/KG	4200 U	21000 U	1700	13000 U	6400 U	32000 L
2.4-Dinitrotoluene	UG/KG	4200 U	21000 U	660 U	13000 U	6400 U	32000 L
Diethylphthalate	UG/KG	4200 U	21000 U	2500	13000 1)	6400 11	32000 1
Fluorene	UG/KG	4200 U	21000 U	3100	13000 U	6400 U	32000 U
Pentachlorophenol	UG/KG	70000 U	350000 U	11000 U	220000 U	110000 U	530000 L
Phenanthrene	UG/KG	2400 J	21000 U	8900	11000 JD	12000	13000 1
Anthracene	UG/KG	4200 U	21000 U	1800	13000 U	2300 1	32000 1
Carbazole	UG/KG	4200 U	21000 U	660 U	13000 U	6400 U	32000 L
Di-n-Butylphthalate	UG/KG	9400	9800 JD	29000	71000 D	58000	62000 D
Fluoranthene	UG/KG	3000 J	21000 U	4900	6200 JD	4900 J	32000 1
Pyrene	UG/KG	4900	21000 U	6000	6800 JD	12000	13000 J
Butylbenzylphthalate	UG/KG	23000	24000 D	56000 E	120000 D	67000	74000 13
	UG/KG	2900 J	21000 U	2200	13000 U	5100 1	32000 1
Benzo(a)Anthracene				2800	The second second	200000000000000000000000000000000000000	
Chrysene	UG/KG	3400 J	21000 U	100,000	13000 U	6300 J	32000 U
Bis(2-Ethylhexyl)Phthalate		370000 E	320000 D	100000 €	320000 D	440000 1:	460000 D
Di-n-Octylphthalate	UG/KG	2600 J	21000 U	4300	13000 U	2600 J	32000 U
Benzo(b)Fluoranthene	UG/KG	4200	21000 tJ	2200	13000 11	5200 J	32000 U
Benzo(k)Fluoranthene	UG/KG	4200 ()	21000 U	840	13000 U	6-100-11	32000 1
Benzo(a)Pyrene	UG/KG	2700 J	21000 U	1500	13000 0	2800 J	32000 U
Indeno(1,2,3-cd)Pyrene	UG/KG	2300 J	21000 U	660 U	. (3000 1)	2200 1	32000 1
Dibenz(u,h)Anthrucene	UG/KG	4200 U	21000 U	660 11	13000 U	6400 U	32000 (
Benzo(g,h,i)Perylene	UG/KG	3800 J	21000 U	980	13000 U	3000 J	32000 U

B 6. - 8

Table 1B (cont.) Analytical Results - Semivolatile Organic Compounds Furnace Courtyard Area Soil Samples Bayonne Barrel and Drum Site Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix	S.OV	FCA2A 2-4 70094006 01/06/97 Soil	FCA2A 2-4DL 70094006DL 01/06/97 Soil	FCA-3 70092002 01/06/97 Soil	FCA-3D1. 70092002D1. 01/06/97	FCA-4 70092003 01/06/97 Soil	FCA-4DL 70092003DL 01/06/97
Sample Depth (feet below ground surf		(2-4)	(2-4)	(1-3)		(1-3)	
PARAMETERS	UNITS			100			
SEMI-VOLATILES	1000				10		
Phenol	UG/KG	19000	30000 JD	1700	1900 11)	330 1	8400 ()
1,3-Dichlorobenzene	UG/KG	4400 U	44000 U	58 J	2300 U	130 U	2500 U
1,4-Dichlorobenzene	UG/KG	4400 U	44000 U	120	2300 U	100 J	2500 U
1,2-Dichlorobenzene	UG/KG	9100	44000 U	560	2300 U	370	2500 1)
2-Methylphenol	UG/KG	37000	150000 U	710	7500 U	450	2500 JI
4-Methylphenol	UG/KG	15000 U	150000 U	2600	3000 JD	3200	8400 U
Isophorone	UG/KG	110000	140000 D	500	2300 U	860	2500 1)
2,4-Dimethylphenol	UG/KG	15000 U	150000 LI	1700	2200 11)	13(8)	11 000 11
2,4-Dichlorophenol	UG/KG	15000 U	150000 U	380	7500 U	220 J	8400 11
1,2,4-Trichlorobenzene	UG/KG	4400 LI	44000 U	1300	1500 JD	210	2500 U
Naphthalene	UG/KG	220000	300000 D	4300	6500 D	3700	3900 13
2-Methylnaphthalene	UG/KG	46000	64000 D	3500	4600 D	3200	3400 13
2,4,5-Trichlorophenol	UG/KG	74000 U	740000 U	480 J	39000 U	130 J	43000 L
Dimethylphthalate	UG/KG	4400 U	44000 U	110 1/	2300 U	130 0	2500 17
Acenaphthylene	UG/KG	3000 1	44000 U	550	2300 U	1100	1100 11
Acenaphthene	UG/KG	4400 U	44000 U	930	1100 JD	1200	1100 11
Dibenzofuran	UG/KG	4400 U	44000 U	810	940 JD	1000	950 J
2,4-Dinitrotoluene	UG/KG	4400 U	44000 U	110 U	2300 U	130 U	2500 U
Diethylphthalate	UG/KG	4400 U	44000 U	3200	4500 D	240	2500 U
Fluorene	UG/KG	4900	44000 U	1400	2100 JD	2200	2500 JI
Pentachlorophenol	UG/KG	74000 U	740000 U	200 1	39000 U	6) 1	43000 ()
Phenanthrene	UG/KG	58000	73000 D	4600	7300 D	6300	7700 13
Anthracene	UG/KG	7000	44000 U	1800	2400 D	3100	3300 13
Carbazole	UG/KG	2800 J	44000 U	680	1200 JD	1100	1200 Ji
Di-n-Butylphthalate	UG/KG	220000	280000 D	5600	2300 U	1400	2200 JI
Fluoranthene	UG/KG	10000	44000 U	3100	5400 D	4800	6600 D
Pyrene	UG/KG	40000	63000 D	4100	5700 D	6500	7200 13
Butylbenzylphthalate	UG/KG	200000	330000 D	12000 E	27000 D	2000	2700 13
Benzo(a)Anthracene	UG/KG	4400 U	44000 U	1600	2100 113	2700	2700 13
	UG/KG	10000	15000 JD	2400	2800 1)	3000	3000 13
Chrysene	120,000,000	1100000 E	1500000 D	26000 E	88000 D	19000 E	44000 D
Bis(2-Ethylhexyl)Phthalate	UG/KG	7900	44000 U	2400	3200 D	2100	2500 JI
Di-n-Octylphthalate							2900 1)
Benzo(b)Fluoranthene	UG/KG	2600 J	44000 U	2200	2300 D	3400	
Benzo(k)Fluoranthene	UG/KG	4400 U	44000 U	820	800 JD	1200	1200 JI
Benzo(a)Pyrene	UG/KG	2200 J	44000 U	1400	1900 11	2600	2400 JL
Indeno(1,2,3-cd)Pyrene	UG/KG	4400 U	44000 U	110 U	2300 U	130 U	1200 JI
Dibenz(a,h)Anthrucene	UG/KG	4400 U	44000 U	(10 0)	2300 U	240	2500 U
Benzo(g,h,i)Perylene	UG/KG	4400 U	44000 U	600	1000 10	820	2500 U

Table 1B (cont) Analytical Results - Semivolatile Organic Compounds Furnace Courtyard Area Soil Samples Bayonne Barrel and Drum Site Newark, New Jersey

Blusland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix Sample Depth (feet below ground surface)		FCA5(0-1.5) FCA-6 70141015 70092004 01/09/97 01/06/97 Soil Soil (0-1.5) (0-2)		FCA-6DL 70092004DL 01/06/97	FCA7 0-2 70094001 01/06/97 Soil (0-2)	FCA7 2-4 70094002 01/06/97 Soil (2-4)	FCA7 2-4DL 70094002DL 01/06/97 Soil (2-4)	FCA-8 2-4 70094004 01/06/97 Soil (2-4)	
	AMETERS	UNITS							
	VOLATILES			1			the more t	100000	
Phenol		UG/KG	190000	1000 J	40000 U	12000 U	62000	61000 JD	12000 1
1,3-Dichlo	robenzene	UG/KG	12000 U	610 U	12000 U	3700 U	2300 U	23000 U	3600 t
1,4-Dichle	robenzene	UG/KG	12000 U	610 U	12000 U	3700 U	2300 11	23000 11	3600 t
1,2-Dichle	robenzene	UG/KG	18000	610 U	12000 U	3700 U	2300 (1	23000 0	3600 (
2-Methylp	henol	UG/KG	22000 J	2000 U	40000 U	12000 U	7600 11	76000 U	12000 1
4-Methylp		UG/KG	840000	2000 U	40000 U	1700 J	7600 U	76000 U	12000 t
Isophoron		UG/KG	68000	2000	12000 U	3700 U	63000	71000 1)	3600 1
2,4-1)imet		UG/KG	38000 U	2000 U	40000 U	12000 U	7600 11	76000 U	3900 1
2,4-Dichle	* 1	UG/KG	38000 U	2000 U	40000 U	12000 U	7600 U	76000 (1	12000 1
	hlorobenzene	UG/KG	60000	420 J	12000 11	3700 U	59000	69000 ()	3600 (
Naphthale		UG/KG	380000	2600	12000 U	3800	140000	170000 12	3600 1
	aphthulene	UG/KG	140000	2700	12000 17	3400 1	49000	30000 1)	3600 1
2 4 5-Triel	lorophenol	UG/KG	190000 U	10000 U	210000 U	62000 U	38000 U	380000 U	61000 1
Dimethylp		UG/KG	12000 U	350 1	12000 U	3700 U	11000	23000 U	3600 1
Acenaphth		UG/KG	21000	640	12000 U	4300	9800	23000 U	3600 (
Acenaphth		UG/KG	42000	660	12000 11	2800 J	2300 11	23000 U	3600 1
Dibenzofu		UG/KG	42000	610 U	12000 11	3700 U	2300 11	23000 U	3600 1
2,4-Dintro		UG/KG	12000 U	400 J	12000 U	3700 U	2300 U	23000 U	3600 1
Diethylpht		UG/KG	46000	660	12000 U	3700 U	20000	23000 U	3600 t
	narate	UG/KG	84000	1000	12000 U	3700 U	8300	23000 U	3600 t
Fluorene	akana.	UG/KG	190000 U	10000 U	210000 U	62000 U	38000 U	380000 U	61000 1
Pentchloro		The second second	150000 B	4700				34000 1)	20.00
Phenanthre		UG/KG			5500 10	1500 1	30000	W 2000 CO. 1	3600 1
Anthracen	e	UG/KG	32000	1300	12000 U	3700 11	5400	23000 U	3600 L
Carbazole	13.50	UG/KG	43000	610 U	12000 U	3700 U	2300 U	23000 U	3600 1
Di-ii-Buty	The state of the s	UG/KG	580000	3200	4700 JD	2100 J	360000 E	330000 D	4800
Fluoranthe	ne	UG/KG	61000 B	4700	6100 JD	3700 ti	15000	Uf 00081	3600 (
Pyrene	diam'r.	UG/KG	38000 B	6600	8600 JD	3700 U	18000	25000 D	3600 (
	ylphthalate	UG/KG	530000	8200	12000 D	3700 U	1300000 E	1300000 13	61000
Benzo(a)A	nthrucene	UG/KG	16000	2300	12000 ()	3700 U	9000	23000 U	3600 (
Chrysene		UG/KG	23000	2500	12000 U	3700 U	0000	23000 U	3600 (
	lhexyl)Phthalate		940000	150000 E	550000 D	94000	1200000 E	1200000 1)	12000
Di-n-Octyl		UG/KG	22000	39000 E	55000 1)	13000	11000	23000 11	3600 (
Benzo(b)F	luoranthene	UG/KG	14000	4800	4800 JD	3700 U	5800	23000 U	3600 L
Benzo(k)F	luoranthene	UG/KG	9600 J	1600	12000 U	3700 U	1800 J	23000 U	3600 L
Benzo(a)P	yrene	UG/KG	11000 J	3800	4300 JD	3700 U	4500	23000 U	3600 t
Indeno(1,2	3-cd)Pyrene	UG/KG	12000 U	610 U	12000 U	3700 U	2300	23000 1/	3600 1
Dinez(a,h)	Anthracene	UG/KG	12000 U	490 3	12000 U	3700 U	2300 U	23000 11	3600 (
	i)Perylene	UG/KG	12000 U	4500	4700 JD	3600 1	1700	23000 17	3600 1

Table 1C
Analytical Results - Pesticides/PCBs
Furnace Courtyard Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix Sample Depth (feet below ground surface)		FCA-1 0-2 70094003 01/06/97 Soil (0-2)	FCA-2 70092001 01/06/97 Soil (0-2)	FCA2A 0-2 70094005 01/06/97 Soil (0-2)	FCA2A 2-4 70094006 01/06/97 Soil (2-4)	FCA-3 70092002 01/06/97 Soil (1-3)	FCA-4 70092003 01/06/97 Soil (1-3)
PARAMETERS	UNITS						
PESTICIDES/PCB's							
delta BHC	UG/KG	230 U	260	180 U	120 U	95 U	100 11
gamma BHC	UG/KG	230 U	110 U	180 U	120 U	95 U	100 11
Aldrin	UG/KG	230 U	110 U	180 U	120 U	95 U	100 ()
Heptachlor epoxide	UG/KG	230 U	110 U	180 U	120 U	95 U	100 U
Dieldrin	UG/KG	470 U	220 U	350 U	240 U	190 U	210 U
4,4'-DDE	UG/KG	1500	1500	2800	240 U	1300	520
Endosulfan II	UG/KG	470 U	220 U	350 U	240 U	190 U	210 ()
4,4'-DDD	UG/KG	1400	370	350 U	710	490	920
Endosulfan sulfate	UG/KG	470 U	220 U	350 U	240 U	190 U	210 U
Methoxychlor	UG/KG	2300 U	1100 U	1800 U	1200 U	950 U	1000 U
alpha-Chlordane	UG/KG	860	400	220	170	1200	930
gamma-Chlordane	UG/KG	98 J	640	250	270	940	340
Aroclor-1248	UG/KG	34000	2200 U	3500 U	2400 U	24000	22000
Aroclor-1254	UG/KG	35000	2200 U	3500 U	2400 U	1900 U	2100 11
Aroclor-1260	UG/KG	4700 U	2200 U	3500 U	2400 U	8200	10000

Table IC (cont.)
Analytical Results - Pesticides/PCBs
Furnace Courtyard Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix Sample Depth (feet below ground surface)		FCA5(0-1.5) 70141015 01/09/97 Soil (0-1.5)	FCA-6 70092004 01/06/97 Soil (0-2)	FCA-6DL 70092004DL 01/06/97	FCA-7 0-2 70092005 01/06/97 Soil (0-2)	FCA7 2-4 70094002 01/06/97 Soil (2-4)	FCA-8 2-4 70094004 01/06/97 Soil (2-4)	FCA-8 2-4DL 70094004DL 01/06/97 Soil (2-4)
PARAMETERS	UNITS	1	1					
PESTICIDES/PCB's	DU WALL			1 - 1 - 1 - 1 - 1				
delta BHC	UG/KG	26 U	100 U	510 U	4.1 U	130 U	410 U	4100 U
gamma BHC	UG/KG	26 U	100 U	510 U	4.1 U	83 J	410.11	4100 U
Aldrin	UG/KG	26 U	100 U	510 U	6.5	130 U	410 U	4100 U
Heptachlor epoxide	UG/KG	51	100 U	510 U	4.1 U	130 U	410 U	4100 U
Dieldrin	UG/KG	51 U	200 U	1000 U	13	250 U	810 U	8100 U
4,4'-DDE	UG/KG	350	5700 E	6400 D	15	1700	810 U	8100 U
Endosulfan II	UG/KG	51 U	200 U	1000 U	31	250 U	810 U	8100 U
4,4'-DDD	UG/KG	280	200 U	1000 U	8.2 U	640	810 11	8100 U
Endosulfan sulfate	UG/KG	51 U	200 U	1000 U	58	250 U	810 U	8100 U
Methoxychlor	UG/KG	260 U	1000 U	5100 U	7.6 J	1300 U	4100 U	41000 U
alpha-Chlordane	UG/KG	270	1200	1500 D	10	1400	410 U	4100 U
gamma-Chlordane	UG/KG	290	450	540 D	14	1300	410 U	4100 U
Aroclor-1248	UG/KG	510 U	30000	36000 D	82 U	2500 U	140000	140000
Aroclor-1254	UG/KG	510 U	2000 U	10000 U	82 U	2500 U	370000 E	430000
Aroclor-1260	UG/KG	510 U	21000	16000 D	82 U	2500 U	8100 U	81000 U

Table 1D
Analytical Results - Metals
Furnace Courtyard Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample	ID	FCA-1 0-2	FCA-2	FCA2A 0-2	FCA2A 2-4	FCA-3
Laboratory Sample Number		70094003	70092001	70094005	70094006	70092002
Sampling Date		01/06/97	01/06/97	01/06/97	01/06/97	01/06/97
Sample Matrix		Soil	Soil	Soil	Soil	Soil
Sample Depth (feet below ground surface)		(0-2)	(0-2)	(0-2)	(2-4)	(1-3)
PARAMETERS	UNITS					
METALS						
Aluminum	MG/KG	5690	5140_	6720	3970	5140
Antimony	MG/KG	172.	48.0	231.	123.	27.5
Arsenic	MG/KG	7.42	4.31	12.4	0.414 11	16.2
Barium	MG/KG	3240	1360	2480	2900	899.
Beryllium	MG/KG	0.355 B	0.542	0.451 B	0.680	0.645
Cadmium	MG/KG	61.0	37.9	42.7	53.9	13.3
Calcium	MG/KG	16000	23100	13800	11600	15400
Chromium	MG/KG	624.	438.	1030	2700	233.
Cobalt	MG/KG	80.8	103.	2690	266.	22.1
Copper	MG/KG	490.	349.	1380	1970	393.
Iron	MG/KG	38200	18100	71300	21800	96500
Lead	MG/KG	3360	3300	5260	13600	1390
Magnesium	MG/KG	2390	5780	3490	1600	7000
Manganese	MG/KG	744.	441.	1040	2410	534.
Mercury	MG/KG	10.1	18.7	4.47	36.3	6.43
Nickel	MG/KG	100.	45.6	192.	83.9	67.0
Potassium	MG/KG	513. B	500. B	415. B	182. B	482. 13
Selenium	MG/KG	2.04	2.66	4.08	1.70	6.50
Silver	MG/KG	2.18	1.41	2.73	1.13 B	3.27
Sodium	MG/KG	366. B	47.3 U	75.8 U	52.7 U	235, B
Thallium	MG/KG	1.27 B	0.971 U	3.81	2.85	2,31
Vanadium	MG/KG	24.4	12.2	33.0	3.18	29.1
Zinc	MG/KG	1730	1680	5740	3850	646.

Table 1D (cont.)
Analytical Results - Metals
Furnace Courtyard Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample Laboratory Sample Number	: ID	FCA-4 70092003	FCA5(0-1.5) 70141015	FCA-6 70092004	FCA7 0-2 70094001	FCA7 2-4 70094002	FCA-8 2-4 70094004
Sampling Date Sample Matrix		01/06/97 Soil	01/09/97 Soil	01/06/97 Soil	01/06/97 Soil	01/06/97 Soil	01/06/97 Soil
Sample Depth (feet below ground surface)		(1-3)	(0-1.5)	(0-2)	(0-2)	(2-4)	(2-4)
PARAMETERS	UNITS						
METALS							
Aluminum	MG/KG	4010	4280	7280	1990	6810	6840
Antimony	MG/KG	28.9	125.	112.	26.7	132.	61.2
Arsenic	MG/KG	32.9	4.33 U	14.0	52.9	21.3 U	50.3
Barium	MG/KG	1180	1940	3180	370.	6880	2410
Beryllium	MG/KG	0.550	0.630 B	0.410 B	2.55 B	5.14 13	2.78 1
Cadmium	MG/KG	17.7	136.	143.	0.522 U	55.7	28.6
Calcium	MG/KG	22000	10300	16300	8100 13	16400 B	15700
Chromium	MG/KG	201.	2030	846.	1260	31,100	1330
Cobalt	MG/KG	15.3	85.8	56.3	119. B	185. B	50.2 1
Copper	MG/KG	453.	1260	1140	1090	894.	1420
Iron	MG/KG	49300	35400	52500	721000	115000	275000
Lead	MG/KG	2020	10200	8130	1840	172000	7200
Magnesium	MG/KG	1370	1340 B	3500	1180 B	2000 B	2410 H
Manganese	MG/KG	269.	464.	380.	4470	1200	1150
Mercury	MG/KG	8.19	43.9	6.30	0.349	42.1	0.966
Nickel	MG/KG	101.	86.7	130.	1050	240.	276.
Potassium	MG/KG	578. B	231. B	443. B	266. 11	655. U	265. 1
Selenium	MG/KG	6.19	6.80 B	56.3	7.03 U	17.3 U	7.00 1
Silver	MG/KG	2.25	56.7	4.37	0.983 U	6.95 B	2,60 1
Sodium	MG/KG	386. B	552. U	172. B	1100 U	2710 U	1100 U
Thallium	MG/KG	0.928 U	11.3 U	2.25	22.6 U	55,7 U	22.5 1.
Vanadium	MG/KG	36.2	16,0	38.5	42.9	6.65 B	45.2
Zinc	MG/KG	929.	2010	4620	1480	4430	4190

Table 1E
Analytical Results - Dioxins/Dibenzofurans
Furnace Courtyard Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix Sample Depth (feet below ground surface)		FCA-1 0-2 70094003 01/06/97 Soil (0-2)	FCA-2 70092001 01/06/97 Soil (0-2)	FCA-2A 0-2 70094005 01/06/97 Soil (0-2)	FCA-2A 2-4 70094006 01/06/97 Soil (2-4)	FCA-3 70092002 01/06/97 Soil (1-3)	FCA-4 70092003 01/06/97 Soil (J-3)
PARAMETERS	UNITS						
DIOXINS/DIBENZOFURANS	-						-
1,2,3,6,7,8-HxCDD	UG/KG	0.483 U	0.458 U	0.69 U	0.459 U	0.394 U	0.433 U
1,2,3,7,8,9-HxCDD	UG/KG	0.414 U	0.392 U	0.757 U	0.504 U	0.388 U	0.371 U
1,2,3,4,6,7,8-HpCDD	UG/KG	2.44	2.2	2.03	0.782	3.94	2.15
1,2,3,4,6,7,8,9-OCDD	UG/KG	67	27.6	17.3	14.2	38.8	24.1
2,3,7,8-TCDF	UG/KG	0.36	0.636	0.208 U	0.336	1.7	0.964
1,2,3,7,8-PeCDF	UG/KG	0.566 U	0.536 U	0.433	0.269 U	0.462 U	- 0.507 L
2,3,4,7,8-PeCDF	UG/KG	0.539 U	0.51 U	1.35	0.2 U	0.439 U	0.483 L
1,2,3,4,7,8-HxCDF	UG/KG	0.691 U	0.694	5.29	0.366 U	3.62	0.619 L
1,2,3,6,7,8-HxCDF	UG/KG	0.649 U	0.458 U	0,697	0.268 U	0.394 U	0.433 L
2,3,4,6,7,8-HxCDF	UG/KG	0.497 U	0.471 U	0.57	0.408 U	0.406 U	0.445 L
1,2,3,7,8,9-HxCDF	UG/KG	0.304 U	0.288 U	0.534 U	0.419 U	0.248 U	0.272 L
1,2,3,4,6,7,8-HpCDF	UG/KG	0.497 U	1.51	12.2	0.355 U	5.69	8.75
1,2,3,4,7,8,9-HpCDF	UG/KG	0.442 U	0.419 U	U 108.0	0.629 U	0.361 U	0.396 L
1,2,3,4,6,7,8,9-OCDF	UG/KG	0.829 U	1.73	10.6	2.86	4.22	6.54
TOTAL TCDD	UG/KG	0.138 U	0.131 U	0.363 U	0.292 U	0.113 U	0.124 L
TOTAL PeCDD	UG/KG	0.774 U	0.732 U	0.747 U	0.6 U	0.631 U	0.693 L
TOTAL HxCDD	UG/KG	0.414 U	0.392 U	1.2	0.459 U	0,538	0.371 L
TOTAL HpCDD	UG/KG	3.39	4.54	3.57	0.782	7.01	4.09
TOTAL TCDF	UG/KG	1.16	2.15	29.9	0.336	7.06	3.73
TOTAL PeCDF	UG/KG	0.539 U	4.42	21.6	0.247	6.34	2.74
TOTAL HxCDF	UG/KG	0.304 U	1.2	14.7	0.237	13,2	4.34
TOTAL HpCDF	UG/KG	0.442 U	1.51	14	0.355 1/	5.69	8.75
TOTAL TCDD Equivalents	UG/KG	0.13	0.20	1.52	0.058	0.67	0.24

Table 1E (cont.) Analytical Results - Dioxins/Dibenzofurans Furnace Courtyard Area Soil Samples Bayonne Barrel and Drum Site Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix		FCA5(0-1.5) 70141015 01/09/97 Soil	FCA-6 70092004 01/06/97 Soil	FCA7 0-2 70094001 01/06/97 Soil	FCA7 2-4 70094002 01/06/97 Soil	FCA-8 2-4 70094004 01/06/97 Soil
Sample Depth (feet below ground surface).	(0-1.5)	(0-2)	(0-2)	(2-4)	(2-4)
PARAMETERS	UNITS					
DIOXINS/DIBENZOFURANS						
1,2,3,6,7,8-HxCDD	UG/KG	0.521 U	0.4007 U	0.41 U	0.51	0.411 U
1,2,3,7,8,9-HxCDD	UG/KG	0.38 U	0.379	0,351 U	0.471	1.13
1,2,3,4,6,7,8-HpCDD	UG/KG	3.13	9.6	0.703 U	39.7	2.08
1,2,3,4,6,7,8,9-OCDD	UG/KG	84.3	53.5	1.42	397	7.95
2,3,7,8-TCDF	UG/KG	0.0985 U	4.96	0.0937 U	0.165 U	1,25
1,2,3,7,8-PeCDF	UG/KG	0.535 U	0.521	0.48 U	0.273 U	0.482 U
2,3,4,7,8-PeCDF	UG/KG	0.901 U	1.03	0.457 U	0.203 U	0.549
1,2,3,4,7,8-HxCDF	UG/KG	1.28 U	4.1	0.586 U	0.294 U	3.32
1,2,3,6,7,8-HxCDF	UG/KG	1.29 U	0.4007 U	0.551 U	0.216 U	0.904
2,3,4,6,7,8-HxCDF	UG/KG	0.957 U	0.735	0.422 U	0.328 U	0.747
1,2,3,7,8,9-HxCDF	UG/KG	1.03 U	0.256 U	0.258 U	0.337 U	0.259 U
1,2,3,4,6,7,8-HpCDF	UG/KG	0.38 U	5.14	0.422 U	0.962	0.982
1,2,3,4,7,8,9-HpCDF	UG/KG	0.718 U	0.372 U	0.375 U	0.506 U	0.441
1,2,3,4,6,7,8,9-OCDF	UG/KG	10.6	2.86	0.703 U	3.03	0.705 U
TOTAL TCDD	UG/KG	0.113 U	0.171	0.117 U	0.36 U	0.118 U
TOTAL PeCDD	UG/KG	1.03 U	0.995	0.656 U	0.572	0.658 U
TOTAL HxCDD	UG/KG	0.614	6.08	0.351 U	4.17	7.08
TOTAL HpCDD	UG/KG	6.89	18.7	0.703 U	76.5	3.86
TOTAL TCDF	UG/KG	0.262	25.5	0.0937 U	0.155	3,59
TOTAL PeCDF	UG/KG	50.6	13.1	0.457 U	64.6	6.86
TOTAL HxCDF	UG/KG	20.5	9.72	0.258 U	57.6	11.4
TOTAL HpCDF	UG/KG	0.38 U	5.14	0.375 U	4.72	2.15
TOTAL TCDD Equivalents	UG/KG	0.13	1.76	0.0014	0.905	1.05

TABLE 2 STORAGE TANK AREA SOIL SAMPLES Table 2A
Analytical Results - Volatile Organic Compounds
Storage Tank Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix Sample Depth (feet below ground s	STA-1(0-2) 70109002 01/07/97 Soil (0.5-2)	STA-2(0-2) 70109001 01/07/97 Soil (0.5-2)	STA-3(1-3) 70109003 01/07/97 Soil (1-3)	
PARAMETERS	UNITS			
VOLATILES	1 7 7 7 1 1 1			17 7 17 17 11 17
Acetone	UG/KG	15	720 U	1800 U
Benzene	UG/KG	6 U	270 J	2400
Chlorobenzene	UG/KG	6 U	430	2800
Ethylbenzene	UG/KG	6 U	540	5700
Toluene	UG/KG	7	890	3900
Xylenes (Total)	UG/KG	6 U	3100	19000

Table 2B
Analytical Results - Semivolatile Organic Compounds
Storage Tank Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix Sample Depth (feet below ground surface)		STA-1(0-2) 70109002 01/07/97 Soil (0-2)	STA-1(0-2)DL 70109002DL 01/07/97 Soil (0-2)	STA-2(0-2) 70109001 01/07/97 Soil (0-2)	STA-2(0-2)DL 70109001DL 01/07/97 Soil (0-2)	STA-3(1-3) 70109003 01/07/97 Soil (1-3)	STA-3(1-3)DI 70109003DL 01/07/97 Soil (1-3)
PARAMETERS	UNITS						
SEMI-VOLATILES							
Phenol	UG/KG	380 U	3800 U	400 U	2000 U	3900 J	50000 U
Isophorone	UG/KG	330	450 JD	120 U	600 U	1500 U	15000 U
Naphthalene	UG/KG	1300	1700 D	2800	5000 D	4100	6200 JD
2-Methylnaphthalene	UG/KG	520	620 JD	9500 E	15000 D	2800	6600 JD
Acenaphthylene	UG/KG	360	420 JD	120 U	600 U	600 J	15000 U
Acenaphthene	UG/KG	160	1100 U	120 U	600 U	1500 J	15000 U
Dibenzofuran	UG/KG	110 U	1100 U	120 U	600 U	1000 J	15000 U
Fluorene	UG/KG	440	1100 U	120 U	1400 D	1400 J	15000 U
N-Nitrosodiphenylamine (1)	UG/KG	110 U	1100 U	120 U	600 U	370000 E	380000 D
Phenanthrene	UG/KG	2400	3100 D	2700	3700 D	4400	6700 JE
Anthracene	UG/KG	570	630 JD	180	470 JD	1500	15000 U
Di-n-Butylphthalate	UG/KG	310	520 JD	420	720 D	570000 E	570000 D
Fluoranthene	UG/KG	1900	1800 D	1400	2000 D	3800	5400 JD
Pyrene	UG/KG	1600	3100 D	1200	2400 D	3600	6800 JD
Butylbenzylphthalate	UG/KG	110 U	1100 U	400	690 D	1500 U	15000 U
Benzo(a)Anthracene	UG/KG	830	1300 D	710	970 D	1700	15000 U
Chrysene	UG/KG	1300	1200 D	810	1200 D	2000	15000 U
Bis(2-Ethylhexyl)Phthalate	UG/KG	17000 E	24000 D	8400 E	14000 D	26000	37000 D
Di-n-Octylphthalate	UG/KG	110 U	470 JD	120 U	600 U	1500 U	15000 U
Benzo(b)Fluoranthene	UG/KG	1200	1100 D	1400	1500 D	1600	15000 U
Benzo(k)Fluoranthene	UG/KG	260	1100 U	270	470 JD	750 J	15000 U
Benzo(a)Pyrene	UG/KG	850	970 JD	780	1000 D	1300 J	15000 U
Indeno(1,2,3-cd)Pyrene	UG/KG	190	650 JD	280	950 D	770 J	15000 U
Dibenz(a,h)Anthracene	UG/KG	62 J	1100 U	79 J	270 JD	1500 U	15000 U
Benzo(g,h,i)Perylene	UG/KG	240	940 JD	320	1300 D	1100 J	15000 U

Table 2C
Analytical Results - Pesticides/PCBs
Storage Tank Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

A

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Blasland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix Sample Depth (feet below ground surface)		STA-1(0-2) 70109002 01/07/97 Soil (0-2)	STA-2(0-2) 70109001 01/07/97 Soil (0-2)	STA-3(1-3) 70109003 01/07/97 Soil (1-3)	STA-3(I-3)DL 70109003DL 01/07/97 Soil (1-3)	
PARAMETERS	UNITS					
PESTICIDES/PCBs						
beta-BHC	UG/KG	48 U	35 J	63 U	250 U	
Aldrin	UG/KG	48 U	50 U	1400 E	1400 D	
4.4'-DDE	UG/KG	350	1400	1200	890 D	
4,4'-DDD	UG/KG	480	770	850	860 D	
alpha-Chlordane	UG/KG	320	610	510	730 D	
gamma-Chlordane	UG/KG	65	190	84	250 U	
Arochlor-1248	UG/KG	14000	14000	13000	23000 D	
Arochlor-1260	UG/KG	6800	5300	6700	5400 D	

Table 2D
Analytical Results - Metals
Storage Tank Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample Laboratory Sample Number Sampling Date Sample Matrix Sample Depth (feet below groun		STA-1(0-2) 70109002 01/07/97 Soil (0-2)	STA-2(0-2) 70109001 01/07/97 Soil (0-2)	STA-3(1-3) 70109003 01/07/97 Soil (1-3)
PARAMETERS	UNITS			
METALS				
Aluminum	MG/KG	3820	3190	6910
Antimony	MG/KG	3.93	15.7	29.6
Arsenic	MG/KG	9.42	11.3	11.4
Barium	MG/KG	365.	899.	5160
Beryllium	MG/KG	0.287 B	1.09	1.00
Cadmium	MG/KG	6.16	9.83	406.
Calcium	MG/KG	5370	6130	19200
Chromium	MG/KG	72.3	138.	1490
Cobalt	MG/KG	12.4	15.9	69.4
Copper	MG/KG	138.	517.	564.
Iron	MG/KG	23800	31700	32900
Lead	MG/KG	545.	1180	21300
Magnesium	MG/KG	2020	1240	2370
Manganese	MG/KG	151.	221.	216.
Mercury	MG/KG	0.851	1.91	2.15
Nickel	MG/KG	48.2	55.4	61.3
Potassium	MG/KG	687.	315. B	523. B
Selenium	MG/KG	1.37	2.24	35.4
Silver	MG/KG	0.780 B	2.39	1.46 B
Sodium	MG/KG	406. B	347. B	54.5 U
Thallium	MG/KG	1.38	1.11 B	4.02
Vanadium	MG/KG	33.2	26.8	33,6
Zinc	MG/KG	437.	1080	11200

Table 2E
Analytical Results - Dioxins/Dibenzofurans
Storage Tank Area Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number		STA-1(0-2) 70109002	STA-2(0-2) 70109001	STA-3(1-3) 70109003
Sampling Date		01/07/97	01/07/97	01/07/97
Sample Matrix		Soil	Soil	Soil
Sample Depth (feet below ground surface)		(0-2)	(0-2)	(1-3)
PARAMETERS	UNITS			
DIOXINS/BENZODUFORANS	S			1111
1,2,3,4,6,7,8-HpCDD	UG/KG	0.71 U	1.08	1.73
1,2,3,4,6,7,8,9-OCDD	UG/KG	7.34	15	17
2,3,7,8-TCDF	UG/KG	3.49	1.6	7.73
1,2,3,7,8-PeCDF	UG/KG	0.485 U	0.43 U	0.531
2,3,4,7,8-PeCDF	UG/KG	0.614	0.459 U	1.31
1,2,3,4,7,8-HxCDF	UG/KG	4.34	6.92	11.6
1,2,3,6,7,8-HxCDF	UG/KG	0.556 U	0.738	0.882
2,3,4,6,7,8-HxCDF	UG/KG	0.426 U	0.45	0.457
1,2,3,4,6,7,8-HpCDF	UG/KG	4.9	8.2	4.73
1,2,3,4,6,7,8,9-OCDF	UG/KG	5.51	10.2	19.6
TOTAL HxCDD	UG/KG	0.355 U	0.622	0.69
TOTAL HpCDD	UG/KG	0.71 U	1.99	1.73
TOTAL TCDF	UG/KG	16.3	9.21	38.9
TOTAL PeCDF	UG/KG	6.52	6.62	17.2
TOTAL HxCDF	UG/KG	6.86	17.3	20.7
TOTAL HpCDF	UG/KG	6.16	8.2	6.43
TOTAL TCDD Equivalents	UG/KG	1.15	1.09	2.85

TABLE 3
YARD AREA SOIL BORINGS

Table 3A
Analytical Results - Volatile Organic Compounds
Yard Area Soil Borings
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground sur	rface)	YA-1(0-2) 70109004 C-5 01/07/97 Soil (0.5-2)	YA-1(7-9) 70109005 C-5 01/07/97 Soil (7-9)	BBD-D1 70109023 C-5 01/07/97 Soil (YA-1(7-9))	YA-1(14-16) 70109006 C-5 01/07/97 Soil (14-16)	YA-2(0-2) 70109007 C-13 01/07/97 Soil (0.5-2)	YA-2(4-6) 70109008 C-13 01/07/97 Soil (4-6)	YA-2(8-10) 70109009 C-13 01/07/97 Soil (8-10)
PARAMETERS	UNITS							
VOLATILES						1	1	
Acetone	UG/KG	13 U	99	28	IIU	16	27	11 U
Benzene	UG/KG	6 U	6 U	6 U	5 U	6 U	6 U	6 U
2-Butanone	UG/KG	13 U	12 U	11 U	11 U	12 U	12 U	11 U
Carbon Disulfide	UG/KG	6 U	6 U	6 U	5 U	6 U	6 U	6 U
Chloroform	UG/KG	6 U	6 U	6 U	5 U	6 U	6 U	6 U
1,2-Dichloroethene (Total)	UG/KG	6 U	6 U	6 U	5 U	6 U	6 U	6 U
Ethylbenzene	UG/KG	6 U	6 U	6 U	5 U	6 U	6 U	6 U
Tetrachloroethene	UG/KG	6 U	6 U	6 U	5 U	6 U	6 U	6 U
Toluene	UG/KG	10	6 U	6 U	9	6 U	3 J	6 U
Trichloroethylene	UG/KG	6 U	6 U	6 U	5 U	6 U	6 U	6 U
Xylenes (Total)	UG/KG	6 U	6 U	6 U	5 U	6 U	6 U	6 U

(1)

Table 3A (cont.)

Analytical Results - Volatile Organic Compounds

Yard Area Soil Borings

Bayonne Barrel and Drum Site

Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground surface)		YA-3(0-2) 70109020 K-18 01/07/97 Soil (0.5-2)	BBD-D2 70109024 K-18 01/07/97 Soil (YA-3 (0.5-2))	YA-3(2-4) 70109021 K-18 01/07/97 Soil (2-4)	YA-3(4-6) 70109022 K-18 01/07/97 Soil (4-6)
PARAMETERS	UNITS				
VOLATILES					
Acetone	UG/KG	71	210	28	69
Benzene	UG/KG	2 J	4 J	12	22
2-Butanone	UG/KG	11 U	33	14 U	18 U
Carbon Disulfide	UG/KG	3 J	9	7 U	9 U
Chloroform	UG/KG	6 U	6 U	7 U	9 U
1,2-Dichloroethene (Total)	UG/KG	6 U	6 U	7 U	9 U
Ethylbenzene	UG/KG	6 U	1 3	12	9 U
Tetrachloroethene	UG/KG	6 U	4 J	7 U	9 U
Toluene	UG/KG	8	7	18	3 J
Trichloroethylene	UG/KG	6 U	6 U	7 U	9 U
Xylenes (Total)	UG/KG	6 U	6 U	98	9 U

Table 3A (cont.)
Analytical Results - Volatile Organic Compounds
Yard Area Soil Borings
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground surface)		YA-4(0-2) 70109012 K-10 01/07/97 Soil (0.5-2)	YA-4(3-5) 70109013 K-10 01/07/97 Soil (3-5)	YA-4(6-8) 70109016 K-10 01/07/97 Soil (6-8)	YA-5(0-2) 70109017 H-12 01/07/97 Soil (0.5-2)	YA-5(3-5) 70109018 H-12 01/07/97 Soil (3-5)	YA-5(6-8) 70109019 H-12 01/07/97 Soil (6-8)	
PARAMETERS	UNITS			l l			1	
VOLATILES	F. T. F. F.	1.7 7.47 1						
Acetone	UG/KG	II U	230	190	19	68	200	
Benzene	UG/KG	6 U	6 U	7 U	6 U	7 U	8 U	
2-Butanone	UG/KG	IIU	63	57	12 U	13 U	67	
Carbon Disulfide	UG/KG	6 U	3 J	2 J	6 U	7 U	8 U	
Chloroform	UG/KG	6 U	3 1	7 U	6 U	7 U	8 ti	
1,2-Dichloroethene (Total)	UG/KG	6 U	8	7 U	6 11	7 U	8 ()	
Ethylbenzene	UG/KG	6 U	2 J	6 J	6 U	7 U	8 U	
Tetrachloroethene	UG/KG	6 U	6 U	7 U	6 U	7 U	8 U	
Toluene	UG/KG	5 1	19	9	5 J	4 J	8 U	
Trichloroethylene	UG/KG	6 U	7	7 U	6 U	7 U	8 U	
Xylenes (Total)	UG/KG	6 U	6 U	39	6 11	7 ()	8 U	

Table 3B

Analytical Results - Semivolatile Organic Compounds

Yard Area Soil Borings

Bayonne Barrel and Drum Site

Newark, New Jersey

Blasland, Bouck & Lee Sample ID		YA-1(0-2)	YA-1(0-2)DL	YA-1(7-9)	YA-1(7-9)DL	BBD-D1	BBD-D1DL	YA-1(14-16)
Laboratory Sample Number		70109004	70109004DL	70109005	70109005101.	70109023	70109023111.	70109006
Grid Location		C-5	C-5	C-5	C-5	C-5	C-5	C-5
Sampling Date		01/07/97	01/07/97	01/07/97	01/07/97	01/07/97	01/07/97	01/07/97
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth (feet below ground s	urface)	(0-2)	(0-2)	(7-9)	(7-9)	(YA-1(7-9))	(YA-1(7-9))	(14-16)
PARAMETERS	UNITS						10000	
SEMI-VOLATILES	211111	1 = -						
Phenol	UG/KG	260 J	2100 U	390 U	1900 U	380 U	1900 U	360 1
4-Methylphenol	UG/KG	150 J	2100 U	390 U	1900 U	380 U	1900 U	360 t
Isophorone	UG/KG	1800	2100 D	120 U	590 U	110 U	570 U	57 J
Naphthalene	UG/KG	900	1100 D	340	450 JD	81 J	570 U	110 1
2-Methylnaphthalene	UG/KG	1700	1900 1)	770	840 D	87 J	570 11	110 1
2-Chloronaphthalene	UG/KG	130 U	640 U	120 11	590 11	110 (1	570 11	110 1
Dimethylphthalate	UG/KG	130 U	640 U	120 U	590 U	110 U	570 U	110 1
Acenaphthylene	UG/KG	2600	2600 D	1300	1400 D	550	640 D	63 J
Acenaphthene	UG/KG	570	690 D	520	630 D	270	300 JD	110 t
Dibenzofuran	UG/KG	130 U	640 U	260	590 U	180	570 U	110 1
2,4-Dinitrotoluene	UG/KG	130 U	640 U	120 U	590 U	110 U	570 U	110 1
Fluorene	UG/KG	2000	2300 D	1900	2300 D	520	600 D	110 1
Hexachlorobenzene	UG/KG	130 U	640 U	120 11	590 11	110 (1	570 (1	110.1
Pentachlorophenol	UG/KG	2200 U	11000 U	2000 U	10000 U	1900 U	9600 U	1800 1
Phenanthrene	UG/KG	15000 E	13000 D	14000 E	13000 D	4600	3900 D	100 J
Anthracene	UG/KG	3000	2600 D	2300	2400 D	1400	1300 D	40 J
Carbazole	UG/KG	130 U	640 U	230	590 U	340	370 JD	110 1
Di-n-Butylphthalate	UG/KG	680	420 JD	120 U	590 U	110 U	570 U	110 1
Fluoranthene	UG/KG	11000 E	8500 1)	8700 E	8400 1)	7600 E	3900 1)	120
Pyrene	UG/KG	12000 E	16000 D	12000 E	12000 1)	5400	6200 1)	160
Butylbenzylphthalate	UG/KG	310	580 JD	120 U	590 U	110 U	570 U	110 1
Benzo(a)Anthracene	UG/KG	6700	7100 D	4000	4200 D	1800	1900 D	81 J
Chrysene	UG/KG	7000 E	7300 D	4300	4700 D	1800	1900 D	74 J
Bis(2-Ethylhexyl)Phthalate	UG/KG	720	1200 D	52 J	590 U	480	700 D	37 J
Benzo(b)Fluoranthene	UG/KG	6600	4500 D	2900	2500 D	1500	(1 000)	83 1
Benzo(k)Fluoranthene	UG/KG	1900	1900 D	850	750 1)	440	520 31)	110 4
Benzo(a)Pyrene	UG/KG	7000 E	5900 13	3300	3200 D	1300	1200 1)	60 1
Indeno(1,2,3-cd)Pyrene	UG/KG	1200	2800 D	800	1400 D	350	380 JD	110 (
Dibenz(a,h)Anthracene	UG/KG	470	1000 D	290	500 JD	120	570 U	110.1
Benzo(g,h,i)Perylene	UG/KG	1500	4200 D	1000	2000 D	450	480 JD	110 (

Table 3B (cont.)

Analytical Results - Semivolatile Organic Compounds

Yard Area Soil Borings

Bayonne Barrel and Drum Site

Newark, New Jersey

Blasland, Bouck & Lee Sample ID		YA-2(0-2)	YA-2(4-6)	YA-2(8-10)	
aboratory Sample Number		70109007	70109008	70109009	
Grid Location		C-13	C-13	C-13	
Sampling Date		01/07/97	01/07/97	01/07/97	
Sample Matrix		Soil	Soil	Soil	
Sample Depth (feet below ground surf	face)	(0-2)	(4-6)	(01-8)	
PARAMETERS	UNITS				
SEMI-VOLATILES					
Phenol	UG/KG	400 U	390 U	380 U	
4-Methylphenol	UG/KG	400 U	390 U	380 U	
Isophorone	UG/KG	120 U	120 U	110 U	
Naphthalene	UG/KG	780	48 J	110 U	
2-Methylnaphthalene	UG/KG	380	120 13	110 U	
2-Chloronaphthalene	UG/KG	120 U	120 U	110 U	
Dimethylphthalate	UG/KG	120 U	120 U	110 U	
Acenaphthylene	UG/KG	1100	100 J	110 U	
Acenaphthene	UG/KG	86 J	120 U	110 U	
Dibenzofuran	UG/KG	120 U	120 U	110 U	
2,4-Dinitrotoluene	UG/KG	120 U	120 U	110 U	
Fluorene	UG/KG	210	120 U	110 U	
Hexachlorobenzene	UG/KG	120 U	120 U	110 U	
Pentachlorophenol	UG/KG	2000 U	2000 U	2000 U	
Phenanthrene	UG/KG	1500	69 J	110 U	
Anthracene	UG/KG	600	46 1	110 U	
Carhazole	UG/KG	46 J	120 U	110 U	
Di-n-Butylphthalate	UG/KG	160	75 J	110 11	
Fluoranthene	UG/KG	1700	84 1	110 17	
Pyrene	UG/KG	3000	150	110 U	
Butylbenzylphthalate	UG/KG	120 U	120 U	110 U	
Benzo(a)Anthracene	UG/KG	2200	130	110 U	
Chrysene	UG/KG	2600	130	110 U	
Bis(2-Ethylhexyl)Phthalate	UG/KG	440	140	110 U	
Benzo(b)Fluoranthene	UG/KG	2800	170	110 U	
Benzo(k)Fluoranthene	UG/KG	530	70 1	110 U	
Benzo(a)Pyrene	UG/KG	2300	100 J	110 U	
Indeno(1,2,3-cd)Pyrene	UG/KG	890	49 J	110 U	
Dibenz(a,h)Anthracene	UG/KG	320	120 U	110 U	
Benzo(g,h,i)Perylene	UG/KG	1100	68 J	110 U	

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Table 3B (cont.) Analytical Results - Semivolatile Organic Compounds Yard Area Soil Borings Bayonne Barrel and Drum Site Newark, New Jersey

Blasland, Bouck & Lee Sample ID		YA-3(0-2)	YA-3(0-2)DL	BBD-D2	BBD-D2DL	YA-3(2-4)	YA-3(2-4)DL	YA-3(4-6)
aboratory Sample Number		70109020	70109020DL	70109024	70109024DL	70109021	70109021DL	70109022
Grid Location		K-18	K-18	K-18	K-18	K-18	K-18	K-18
ampling Date		01/07/97	01/07/97	01/07/97	01/07/97	01/07/97	01/07/97	01/07/97
ample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
ample Depth (feet below ground sur	face)	(0-2)	(0-2)	(YA-3(0-2))	(YA-3(0-2))	(2-4)	(2-4)	(4-6)
PARAMETERS	UNITS							
SEMI-VOLATILES								
Phenol	UG/KG	380 U	3800 U	420 U	4200 U	460 U	4600 U	600 (
4-Methylphenol	UG/KG	380 U	3800 U	420 U	4200 U	460 U	4600 U	200
Isophorone	UG/KG	110 U	1100 U	130 U	1300 U	140 U	1400 U	180 1
Naphthalene	UG/KG	1500	2200 D	2600	3200 D	28000 E	23000 D	540
2-Methylnaphthalene	UG/KG	920	9400 D	1500	1900 D	18000 E	17000 D	320
2-Chloronaphthalene	UG/KG	110 U	U 0011	130 U	1300 U	110 J	1400 U	180
Dimethylphthalate	UG/KG	110 U	1100 U	130 U	1300 U	140 U	1400 U	180
Acenaphthylene	UG/KG	6300 E	6500 D	8700 E	7400 D	7800 E	6800 D	2000
Acenaphthene	UG/KG	3800	4800 D	4800	5200 D	4600	4600 D	370
Dibenzofuran	UG/KG	110 U	1100 U	130 U	1300 17	140 U	1400 U	180
2,4-Dinitrotoluene	UG/KG	110 U	1100 U	130 U	1300 17	140 U	1400 U	180
Fluorene	UG/KG	14000 E	13000 D	18000 E	13000 D	12000 E	9800 D	370
Hexachlorobenzene	UG/KG	110 U	1100 U	130 U	1300 U	140 U	1400 U	180
Pentachlorophenol	UG/KG	1900 U	19000 U	2200 U	22000 U	2400 U	24000 U	3100
Phenanthrene	UG/KG	22000 E	22000 D	29000 E	19000 D	44000 E	35000 D	1700
Anthracene	UG/KG	8900 E	9700 D	13000 E	9900 1)	7300	7800 D	1300
Carbazole	UG/KG	110 U	1100 U	130 U	1300 U	140 ()	1400 U	180
Di-n-Butylphthalate	UG/KG	3900	4700 D	1500	1600 D	140 U	760 JD	180
Fluoranthene	UG/KG	32000 E	29000 D	64000 E	26000 D	34000 E	17000 D	4100
Pyrene	UG/KG	30000 E	49000 D	37000 E	51000 D	29000 E	31000 D	1800
Butylbenzylphthalate	UG/KG	110 U	1100 U	130 U	1300 U	140 U	1400 U	180
Benzo(a)Anthracene	UG/KG	19000 E	18000 D	19000 E	18000 D	16000 E	14000 D	3200
Chrysene	UG/KG	9300 E	21000 D	11000 E	21000 D	10000 E	16000 D	3500
Bis(2-Ethylhexyl)Phthalate	UG/KG	5400	6000 D	11000 E	12000 D	2500	2500 D	550
Benzo(b)Fluoranthene	UG/KG	13000 E	12000 D	23000 E	14000 D	9900 E	9200 D	4200
Benzo(k)Fluoranthene	UG/KG	3100	4500 D	3800	3500 D	1300	2600 D	1600
Benzo(a)Pyrene	UG/KG	10000 E	13000 D	16000 E	13000 D	9300 E	9800 D	3700
Indeno(1,2,3-cd)Pyrene	UG/KG	1900	4000 D	2000	3700 D	1500	2600 D	890
Dihenz(a,h)Anthracene	UG/KG	740	1500 D	760	1300 0	590	OF 066	320
Benzo(g,h,i)Perylene	UG/KG	2200	5500 D	2400	5500 1)	1900	3900 1)	9:10

Table 3B (cont.) Analytical Results - Semivolatile Organic Compounds Yard Area Soil Borings Bayonne Barrel and Drum Site Newark, New Jersey

Blasland, Bouck & Lee Sample ID		YA-4(0-2)	YA-4(3-5)	YA-4(6-8)	YA-5(0-2)	YA-5(0-2)DL	YA-5(3-5)	YA-5(6-8)
aboratory Sample Number		70109012	70109013	70109016	70109017	70109017DL	70109018	70109019
Grid Location		K-10	K-10	K-10	11-12	H-12	H-12	H-12
Sampling Date		01/07/97	01/07/97	01/07/97	01/07/97	01/07/97	01/07/97	01/07/97
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth (feet below ground surf	face)	(0-2)	(3-5)	(6-8)	(0-2)	(0-2)	(3-5)	(6-8)
PARAMETERS	UNITS							
SEMI-VOLATILES								
Phenol	UG/KG	380 U	430 U	460 U	380 U	1900 U	440 U	530 17
4-Methylphenol	UG/KG	380 U	430 U	460 U	380 U	1900 U	440 U	530 U
Isophorone	UG/KG	2200	130 U	140 U	170	580 U	130 U	160 U
Naphthalene	UG/KG	570	1400	430	460	450 JD	310	260
2-Methylnaphthalene	UG/KG	230	600	280	220	580 ()	140	160 U
2-Chloronaphthalene	UG/KG	110 U	130 U	140 U	120 11	580 U	130 U	160 1
Dimethylphthalate	UG/KG	52 .1	130 U	140 11	120 11	580 11	130 U	160 1
Acenaphthylene	UG/KG	1300	620	780	180	580 U	130 U	270
Acenaphthene	UG/KG	51 1	200	650	43)	580 U	140	300
Dibenzofuran	UG/KG	40 J	79 J	170	120 U	580 U	150	200
2,4-Dinitrotoluene	UG/KG	110 U	130 U	120 J	120 U	580 U	130 U	160 L
Fluorene	UG/KG	270	700	300	83 1	580 U	280	390
Hexachlorobenzene	UG/KG	72 J	130 U	140 t)	120 17	580 ()	130 U	160 1
Pentachlorophenol	UG/KG	1900 U	850 J	2400 11	2000 11	9900 U	2300 11	2700 t
Phenanthrene	UG/KG	1100	2600	1500	720	700 1)	1800	1000
Anthracene	UG/KG	780	650	900	250	200 JD	250	330
Carbazole	UG/KG	110 U	98 J	140	57 J	580 U	220	190
Di-n-Butylphthalate	UG/KG	410	130 U	140 U	120 U	580 U	130 U	160 L
Fluoranthene	UG/KG	2300	2500	3900	2700	1900 D	4700	1600
Pyrene	UG/KG	2900	3200	3000	2300	3100 D	3400	1600
Butylbenzylphthalate	UG/KG	110 U	88 J	140 U	44 1	580 U	130 U	160 1
Benzo(a)Anthracene	UG/KG	2400	2200	2300	3000	2100 D	3400	1200
Chrysene	UG/KG	2900	2700	2500	2600	3600 D	4400	1300
Bis(2-Ethylhexyl)Phthalate	UG/KG	2900	280	140 U	14000 E	14000 D	280	360
Benzo(b)Fluoranthene	UG/KG	3500	1900	2700	4400	3600 D	7200 E	1700
Benzo(k)Fluoranthene	UG/KG	930	840	860	1300	680 D	1700	620
Benzo(a)Pyrene	UG/KG	2200	2000	2800	2800	2100 0	3900	1100
Indeno(1,2,3-cd)Pyrene	UG/KG	480	820	940	1600	1300 D	2200	860
Dibenz(a,h)Anthracene	UG/KG	180	320	350	530	470 JD	800	280
Benzo(g,h,i)Perylene	UG/KG	560	1000	940	1900	2100 D	2500	1100

Table 3C
Analytical Results - Pesticides/PCBs
Yard Area Soil Borings
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample I Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground		YA-1(0-2) 70109004 C-5 01/07/97 Soil (0-2)	YA-1(7-9) 70109005 C-5 01/07/97 Soil (7-9)	BBD-D1 70109023 C-5 01/07/97 Soil (YA-1(7-9))	YA-1(14-16) 70109006 C-5 01/07/97 Soil (14-16)	YA-2(0-2) 70109007 C-13 01/07/97 Soil (0-2)	YA-2(0-2)DL 70109007DL C-13 01/07/97 Soil (0-2)	YA-2(4-6) 70109008 C-13 01/07/97 Soil (4-6)	YA-2(8-10) 70109009 C-13 01/07/97 Soil (8-10)
PARAMETERS	UNITS				1				
PESTICIDES/PCB's	The second								
alpha-BHC	UG/KG	21 U	2 U	1.9 U	1.8 U	2 U	10 U	2 U	1.9 U
beta-BHC	UG/KG	21 U	2 U	1.9 U	1.8 U	2 U	10 U	2 U	1.9 U
Heptachlor Epoxide	UG/KG	55	2 U	1.9 ()	1.8 U	2 11	10 (1)	0.54 1	1.9 U
4,4'-DDE	UG/KG	120	8.8	30	0.84 J	2 J	2.7 JD	4.0	3.8 U
Endrin	UG/KG	43 U	3.9 U	3.8 U	3.6 U	13	16 JD	47	3.8 U
Endosulfan II	UG/KG	340	3.9 U	48	3.6 U	4 U	20 U	4 U	3,8 U
4,4'-DDD	UG/KG	180	3.9 U	17 -	3.6 U	10	20 U	4 U	3.8 U
Endosulfan sulfate	UG/KG	43 U	3.9 U	3.8 U	3.6 U	4 U	20 U	4 U	3.8 U
4.4'-DDT	UG/KG	43 U	3.9 U	3.8 U	3.6 U	84 E	93 D	4 U	3.8 U
alpha-Chlordane	UG/KG	58	4.5	1.9 U	1.8 U	36 E	44 D	2 U	1.9 U
gamma-Chlordane	UG/KG	19 J	2 U	1.9 U	1.8 U	55 E	66 D	1.2 J	1.9 U
	UG/KG	2100	330	570	54	40 U	200 U	40 U	38 U
1,04,144,144,144,144,144,144,144,144,144	UG/KG	8200	1200	870	36 U	40 U	200 U	40 U	38 U

Table 3C (cont.)
Analytical Results - Pesticides/PCBs
Yard Area Soil Borings
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground surface)		YA-3(0-2) 70109020 K-18 01/07/97 Soil (0-2)	BBD-D2 70109024 K-18 01/07/97 Soil (YA-3(0-2))	BBD-D2DL 70109024DL K-18 01/07/97 Soil (YA-3(0-2))	YA-3(2-4) 70109021 K-18 01/07/97 Soil (2-4)	YA-3(2-4)DL 70109021DL K-18 01/07/97 Soil (2-4)	YA-3(4-6) 70109022 K-18 01/07/97 Soil (4-6)	
PARAMETERS	UNITS				-		-	
PESTICIDES/PCB's			No organization	4				
alpha-BHC	UG/KG	37 J	53 U	210 U	23 U	58 U	3 U	
beta-BHC	UG/KG	47 U	53 U	210 U	23 U	58 U	3 U	
Heptachlor Epoxide	UG/KG	47 U	100	130 JD	23 U	58 U	3 U	
4,4'-DDE	UG/KG	380	330	390 JD	460	480 D	26	
Endrin	UG/KG	95 U	100 U	420 U	46 U	120 U	6.1 U	
Endosulfan II	UG/KG	1100	100 U	420 U	920 E	1200 D	6.1 U	
4,4'-DDD	UG/KG	840	570	630 D	920 E	830 D	22	
Endosulfan sulfate	UG/KG	340	62 J	420 U	46 U	120 U	6.1 U	
4,4'-DDT	UG/KG	95 U	160	180 JD	860 E	120 U	6.1 U	
alpha-Chlordane	UG/KG	420	1000 E	1300 D	23 U	58 U	3 U	
gamma-Chlordane	UG/KG	750	1300 E	1800 D	23 U	58 U	3 U	
Arochlor-1248	UG/KG	15000	9200	10000 D	1800	4200 D	180	
Arochlor-1260	UG/KG	7500	3400	5000 D	4100	5600 D	61 U	

Table 3C (cont.)

Analytical Results - Pesticides/PCBs
Yard Area Soil Borings
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below groun		YA-4(0-2) 70109012 K-10 01/07/97 Soil (0-2)	YA-4(0-2)DL 70109012DL K-10 01/07/97 Soil (0-2)	YA-4(3-5) 70109013 K-10 01/07/97 Soil (3-5)	YA-4(6-8) 70109016 K-10 01/07/97 Soil (6-8)	YA-5(0-2) 70109017 H-12 01/07/97 Soil (0-2)	YA-5(3-5) 70109018 H-12 01/07/97 Soil (3-5)	YA-5(6-8) 70109019 H-12 01/07/97 Soil (6-8)
PARAMETERS	UNITS							
PESTICIDES/PCB's	CWI							
alpha-BHC	UG/KG	47 U	950 U	23 J	23 U	48 U	2.2 U	2.7 U
beta-BHC	UG/KG	47 U	950 U	55 U	23 U	48 U	2,2 U	1.3 J
Heptachlor Epoxide	UG/KG	47 U	950 U	55 U	23 U	48 U	2.2 U	2.7 ()
4,4'-DDE	UG/KG	950	1100 JD	130	46 U	97 1)	4.4 U	3 1
Endrin	UG/KG	95 U	1900 U	110 U	46 U	97 U	4.4 U	5.4 U
Endosulfan II	UG/KG	95 U	1900 U	110 U	46 U	97 U	4.4 U	5.4 U
4,4'-DDD	UG/KG	95 U	1900 U	110 U	46 U	130	4.4 U	6.9
Endosulfan sulfate	UG/KG	95 U	1900 U	110 U	46 U	97 U	4.4 U	5.4 U
4,4'-DDT	UG/KG	95 U	1900 U	110 U	46 U	97 U	4.4 U	5.4 U
alpha-Chlordane	UG/KG	47 U	950 U	55 U	23 U	48 U	2.2 U	2.7 U
gamma-Chlordane	UG/KG	47 U	950 U	55 U	23 U	48 U	2.2 U	2.7 U
Arochlor-1248	UG/KG	130000 E	220000 D	21000	5000	8200	140	390
Arochlor-1260	UG/KG	11000	19000 U	5400	460 U	5200	100	300

Table 3D
Analytical Results - Metals
Yard Area Soil Borings
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground surface)		YA-1(0-2) 70109004 C-5 01/07/97 Soil (0-2)	YA-1(7-9) 70109005 C-5 01/07/97 Soil (7-9)	BBD-D1 70109023 C-5 01/07/97 Soil (YA-1(7-9))	YA-1(14-16) 70109006 C-5 01/07/97 Soil (14-16)	YA-2(0-2) 70109007 C-13 01/07/97 Soil (0-2)	YA-2(4-6) 70109008 C-13 01/07/97 Soil (4-6)	YA-2(8-10) 70109009 C-13 01/07/97 Soil (8-10)
PARAMETERS	UNITS							
METALS								
Aluminum	MG/KG	7830	9180	7650	3710	3760	6760	9990
Antimony	MG/KG	70.9	1.99	5.37	0.120 U	7.63	10.7	0.127 U
Arsenic	MG/KG	34.8	7.74	8.84	2.46	97.9	22.9	3.30
Barium	MG/KG	2220	200.	224.	31.3	1620	5320	45.9
Beryllium	MG/KG	0.904 B	0.635	0.576	0.250 B	0.399 B	0.537 B	0.482
Cadmium	MG/KG	85.5	1.68	3.25	0.347 B	0.906 B	23.9	0.0196 U
Calcium	MG/KG	17400	5400	6380	1300	369. B	2090 B	604
Chromium	MG/KG	455.	25.1	34.7	7.49	55.6	40.8	14.5
Cobalt	MG/KG	26.1 B	7.48	7.48	3.82 B	8.07 B	6.77 B	5.39 B
Copper	MG/KG	1710	90.9	102.	13.4	225.	148.	11.3
Iron	MG/KG	129000	22300	24100	9730	95600	88500	18100
Lead	MG/KG	3240	942.	1300	78.1	1350	2280	9.05
Magnesium	MG/KG	4920 B	2790	3020	1270	209. B	1050 B	2350
Manganese	MG/KG	779.	378.	387.	123.	505.	391.	154
Mercury	MG/KG	1.71	0.181	0.214	0.109 U	1.01	0.181	0.115 U
Nickel	MG/KG	950.	23.7	26.0	8.29	26.8	39.7	14.4
Potassium	MG/KG	833. B	1230	1060	308. B	265. B	271. B	688
Selenium	MG/KG	24.4	0.845	1.66	0.249 U	3.93 B	2.73 U	0.264 U
Silver	MG/KG	8.87 B	0.549 B	0.208 B	0.0348 U	0.386 U	0.632 B	0.0369 U
Sodium	MG/KG	457. U	176. B	40.7 U	119. B	434. U	428. U	41.4 U
Thallium	MG/KG	9.39 U	1.19	1.16	0.802 U	8.90 U	8.79 U	1.05 B
Vanadium	MG/KG	42.5	23.2	21.2	10.4	45.7	15.3	23.3
Zinc	MG/KG	3260	330.	994.	97.4	939.	11700	326

Table 3D (cont.)
Analytical Results - Metals
Yard Area Soil Borings
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample Laboratory Sample Number Grid Location Sampling Date	YA-3(0-2) 70109020 K-18 01/07/97	BBD-D2 70109024 K-18 01/07/97	YA-3(2-4) 70109021 K-18 01/07/97	YA-3(4-6) 70109022 K-18 01/07/97	
Sample Matrix		Soil	Soil	Soil	Soil
Sample Depth (feet below grou	nd surface)	(0-2)	(YA-3(0-2))	(2-4)	(4-6)
PARAMETERS	UNITS				
METALS					
Aluminum	MG/KG	3280	4400	5290	11600
Antimony	MG/KG	44.4	23.4	22.7	8.77
Arsenic	MG/KG	111.	121.	65.7	80.2
Barium	MG/KG	1430	1740	1730	364.
Beryllium	MG/KG	0.718 B	1.99 B	0.523 B	1.07
Cadmium	MG/KG	28.5	23.0	15.9	5.04
Calcium	MG/KG	8420	12200	20400	5140
Chromium	MG/KG	270.	379.	217.	274.
Cobalt	MG/KG	29.3 B	36.4 B	15.6	12.2
Copper	MG/KG	847.	881.	546.	466.
Iron	MG/KG	95100	101000	56500	41900
Lead	MG/KG	4780	3770	2170	575.
Magnesium	MG/KG	1070 B	1590 B	2330	4710
Manganese	MG/KG	528.	596.	424.	323.
Mercury	MG/KG	2.59	2.65	3.92	7.11
Nickel	MG/KG	129.	158.	114.	44.9
Potassium	MG/KG	430. B	504. B	835.	1880
Selenium	MG/KG	43.4	10.7	10.1	2.91
Silver	MG/KG	2.70 B	2.55 B	3.55	2.61
Sodium	MG/KG	409. U	452. U	70.6 B	150. B
Thallium	MG/KG	8.40 U	9.27 U	1.97	2.12
Vanadium	MG/KG	37.8	43.8	38.9	40.8
Zinc	MG/KG	3350	3940	1700	719.

Table 3D (cont.)
Analytical Results - Metals
Yard Area Soil Borings
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID		YA-4(0-2)	YA-4(3-5)	YA-4(6-8)	YA-5(0-2)	YA-5(3-5)	YA-5(6-8)
Laboratory Sample Number Grid Location		70109012	70109013	70109016	70109017	70109018	70109019
		K-10	K-10	K-10	11-12	11-12	11-12
Sampling Date		01/07/97	01/07/97	01/07/97	01/07/97	01/07/97	01/07/97
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth (feet below groun	nd surface)	(0-2)	(3-5)	(6-8)	(0-2)	(3-5)	(6-8)
PARAMETERS	UNITS						
METALS							
Aluminum	MG/KG	2450	4000	7910	5060	3890	7480
Antimony	MG/KG	13.4	16.2	1.68	3.37	2.52	5.18
Arsenic	MG/KG	4.88	15.7	26.0	8.72	7.90	28.8
Barium	MG/KG	336.	1090	293.	273.	979.	1320
Beryllium	MG/KG	0.219 B	0.452 B	0.648	0.423 B	0.312 B	0.553 B
Cadmium	MG/KG	4.73	9.06	2.06	24.7	0.927	9.61
Calcium	MG/KG	4510	7320	8620	10800	23900	125000
Chromium	MG/KG	73.2	132.	122.	51.7	32.4	227.
Cobalt	MG/KG	7.14	28.3	8.65	6.87	3.37 B	7.53 B
Copper	MG/KG	120.	1870	242.	84.0	102.	155.
Iron	MG/KG	11000	45000	32500	26200	35200	67000
Lead	MG/KG	1110	1880	876.	520.	1240	1490
Magnesium	MG/KG	3040	1160	3880	1660	3390	4650
Manganese	MG/KG	69.4	299.	388.	222.	210.	437.
Mercury	MG/KG	5.91	1.68	2.97	1.56	0.362	2.12
Nickel	MG/KG	13.2	41.2	147.	17.0	15.7	26.4
Potassium	MG/KG	411. B	490. B	1340	686.	507. B	1100
Selenium	MG/KG	0.734	2.84	1.20	1.30	3.46	4.40
Silver	MG/KG	0.667 B	2.67	1,56	0.414 B	0.535 B	2.08
Sodium	MG/KG	54.2 B	47.5 U	54.6 B	162. B	85.6 B	57.4 U
Thallium	MG/KG	0.841 U	1.14 B	1.46	1.05 B	0.984 U	1.54 B
Vanadium	MG/KG	25.8	25.6	30.2	25.4	12.1	23.9
Zinc	MG/KG	389.	1450	797.	287.	614.	2180

Table 3E

Analytical Results - Dioxins/Dibenzofurans
Yard Area Soil Borings
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location		YA-1(0-2) 70109004 C-5	YA-1(7-9) 70109005 C-5	BBD-D1 70109023 C-5	YA-1(14-16) 70109006 C-5	YA-2(0-2) 70109007 C-13	YA-2(4-6) 70109008 C-13	YA-2(8-10) 70109009 C-13
Sampling Date		01/07/97	01/07/97	01/07/97	01/07/97	01/07/97	01/07/97	01/07/97
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth (feet below ground surface)		(0-2)	(7-9)	(YA-1(7-9))	(14-16)	(0-2)	(4-6)	(8-10)
PARAMETERS	UNITS							
DIOXINS/BENZODUFORANS								
2,3,7,8-TCDD	UG/KG	0.708 U	0.115 U	0.116 U	0.107 U	0.122 U	0.114 11	0.114 U
1,2,3,7,8-PeCDD	UG/KG	1.09 U	0.645 U	0.649 U	0.598 U	0.681 U	0.636 11	0.636 U
1,2,3,4,7,8-HxCDD	UG/KG	0.691 U	0.45 U	0.452 11	0.416 U	0.475 11	0.443 17	0.443 U
1,2,3,6,7,8-HxCDD	UG/KG	0.522 U	0.403 U	0.406 U	0,373 11	0.426 U	0.398 11	0.398 1)
1,2,3,7,8,9-11xCDD	UG/KG	0.558 11	0.346 U	0.348 11	0.32 1)	0.365 U	0.341 11	0.341 U
1,2,3,4,6,7,8-HpCDD	UG/KG	0.888 1/	0.692 U	0.696 17	0.64 1/	0.73 11	0.682 17	0.682 U
1,2,3,4,6,7,8,9-OCDD	UG/KG	5.07	1.15	1.18	0.768 U	1.71	0.818 11	0.818 U
2,3,7,8-TCDF	UG/KG	4.77	0.127	0.301	0.0854 U	0.259	0.0909 11	0.0909 L
1,2,3,7,8-PeCDF	UG/KG	0.55	0.473 U	0.475 U	0.437 U	0.499 U	0.466 1)	0.466 U
2,3,4,7,8-PeCDF	UG/KG	0.849	0.45 U	0.452 11	0.416 1/	0.475 U	0.443 11	0.443 U
1,2,3,4,7,8-HxCDF	UG/KG	13.8	1.08	1.22	0.534 11	0.608 11	0.568 11	0.568 U
1,2,3,6,7,8-14xCDF	UG/KG	1.12	0.542 U	0.545 U	0.501 U	0.572 U	0.534 11	0.534 U
2,3,4,6,7,8-HxCDF	UG/KG	0.295 U	0.415 U	0.417 U	0.384 U	0.438 U	0.409 11	0.409 L
1,2,3,7,8,9-HxCDF	UG/KG	0.301 U	0.254 U	0.255 U	0.235 U	0.268 U	0.25 11	0.25 U
1,2,3,4,6,7,8-HpCDF	UG/KG	79	3.43	6.72	0.385	1.46	0.409 11	0.409 U
1,2,3,4,7,8,9-HpCDF	UG/KG	0.398 U	0.369 ()	0.371 11	0.341 11	0.389 11	0.364 11	0.364 U
1,2,3,4,6,7,8,9-OCDF	UG/KG	206	3.71	4.89	0.64 11	1.07	0.682 11	0.682 U
TOTAL TCDD	UG/KG	0.708 U	0.115 U	0.116 U	0.107 U	0.122 U	0.114 U	0.114 U
TOTAL PeCDD	UG/KG	1.09 U	0.645 U	0.649 U	0.598 U	0.681 U	0.636 U	0.636 U
TOTAL HxCDD	UG/KG	0.934	0.346 U	0.348 U	0.32 U	0.365 U	0.341 ()	0.341 U
TOTAL HpCDD	UG/KG	0.888 U	0.692 U	0.696 U	0.64 U	0.73 U	0.682 11	0.682 U
TOTAL TCDF	UG/KG	13.4	0.391	1.43	0.0854 11	0.375	0.0909 11	0.0909 U
TOTAL PeCDF	UG/KG	6.99	0.45 U	1.11	0.416 U	0.475 U	0.443 11	0.443 U
TOTAL HxCDF	UG/KG	24.4	1.82	2.08	0.235 17	0.304	0.25 11	0.25 U
TOTAL HpCDF	UG/KG	79.8	3.88	6.72	0.385	1.46	0.364 1)	0.364 U
TOTAL TCDD Equivalents	UG/KG	3.42	0.16	0.23	0.0039	0.043	0	0

Table 3E (cont.) Analytical Results - Dioxins/Dibenzofurans Yard Area Soil Borings Bayonne Barrel and Drum Site Newark, New Jersey

Blasland, Bouck & Lee Sample ID		YA-3(0-2)	BBD-D2	YA-3(2-4)	YA-3(4-6)
Laboratory Sample Number		70109020	70109024	70109021	70109022
Grid Location		K-18	K-18	K-18	K-18
Sampling Date		01/07/97	01/07/97	01/07/97	01/07/97
Sample Matrix		Soil	Soil	Soil	Soil
Sample Depth (feet below ground surface)		(0-2)	(YA-3(0-2))	(2-4)	(4-6)
PARAMETERS	UNITS				
DIOXINS/BENZODUFORANS					
2,3,7,8-TCDD	UG/KG	0.126 U	0.125 U	0.137 U	0.15 U
1,2,3,7,8-PeCDD	UG/KG	0.704 U	0.697 U	0.768 U	0.841 U
1,2,3,4,7,8-14xCDD	UG/KG	0.49 U	0.486 U	0.535 U	0.586 U
1,2,3,6,7,8-11xCDD	UG/KG	0.44 U	0.436 U	0.48 ()	0.526 U
1,2,3,7,8,9-HxCDD	UG/KG	0.377 U	0.374 U	0.411 U	0.451 U
1,2,3,4,6,7,8-HpCDD	UG/KG	4.86	5.15	1.34	0.901 U
1,2,3,4,6,7,8,9-OCDD	UG/KG	19.8	23.2	4.61	1.39
2,3,7,8-TCDF	UG/KG	3.09	3.33	0.673	0.12 U
1,2,3,7,8-PeCDF	UG/KG	0.684	0.913	0.589	0.616 U
2,3,4,7,8-PeCDF	UG/KG	1.59	1.81	1.28	0.586 U
1,2,3,4,7,8-HxCDF	UG/KG	19.2	25.3	0.685 U	0.751 U
1,2,3,6,7,8-HxCDF	UG/KG	2.39	3.44	2.83	0.706 U
2,3,4,6,7,8-HxCDF	UG/KG	0.679	0.978	0.866	0.541 U
1,2,3,7,8,9-HxCDF	UG/KG	0.276 U	0.274 U	0.302 U	0.33
1,2,3,4,6,7,8-HpCDF	UG/KG	62.4	83.9	142	14.5
1,2,3,4,7,8,9-HpCDF	UG/KG	0.824	1.17	1.47	0.481 U
1,2,3,4,6,7,8,9-OCDF	UG/KG	45.3	52.3	173	16.9
TOTAL TCDD	UG/KG	0.407	0.362	0.137 U	0.15 U
TOTAL PeCDD	UG/KG	0.704 U	0.697 U	0.768 U	0.841 U
TOTAL HxCDD	UG/KG	2.52	2.99	3.52	1.86
TOTAL HpCDD	UG/KG	8.93	9.74	3	0.901 ()
TOTAL TCDF	UG/KG	17.4	18.6	8.42	0.947
TOTAL PeCDF	UG/KG	19.2	24.6	39.6	3.6
TOTAL HxCDF	UG/KG	40.6	52.6	29	5.62
TOTAL HPCDF	UG/KG	64.7	87.2	146	14.5
TOTAL TCDD Equivalents	UG/KG	4.11	5.23	2.73	0.20

Table 3E (cont.)
Analytical Results - Dioxins/Dibenzofurans
Yard Area Soil Borings
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID		YA-4(0-2)	YA-4(3-5)	YA-4(6-8)	YA-5(0-2)	ΥΛ-5(3-5)	YA-5(6-8)
Laboratory Sample Number		70109012	70109013	70109016	70109017	70109018	70109019
Grid Location		K-10	K-10	K-10	H-12	11-12	11-12
Sampling Date		01/07/97	01/07/97	01/07/97	01/07/97	01/07/97	01/07/97
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth (feet below ground surface)		(0-2)	(3-5)	(6-8)	(0-2)	(3-5)	(6-8)
PARAMETERS	UNITS						
DIOXINS/BENZODUFORANS							
2,3,7,8-TCDD	UG/KG	2.83 U	0.134 U	0.152 U	0.115 U	0.137 U	0.158 U
1,2,3,7,8-PeCDD	UG/KG	5.31 U	0.749 U	0.85 U	0.642 11	0.767 U	0.883 1
1,2,3,4,7,8-11xCDD	UG/KG	0.501	0.521 U	0.592 ()	0.447 (1	0.534 U	0.615 1
1,2,3,6,7,8-HxCDD	UG/KG	0.386 U	0.468 U	0.531 U	0.401 U	0.479 U	0.552 1
1,2,3,7,8,9-HxCDD	UG/KG	0.403	0.401 U	0.455 11	0.344 ()	0.411 U	0.473 1
1,2,3,4,6,7,8-11pCDD	UG/KG	0.662 U	1.62	0.911 11	0.934	0.821 U	0.946 1
1,2,3,4,6,7,8,9-OCDD	UG/KG	6.18	20.6	1.09 11	6.05	0.986 U	1.13 1
2,3,7,8-TCDF	UG/KG	903	32,2	3.93	2.86	0.11 U	0.126 1
1,2,3,7,8-PeCDF	UG/KG	48.5	1.78	0.622 U	0.47 U	0.561 U	0.646 1.
2,3,4,7,8-PeCDF	UG/KG	107	6.21	0.592 U	0.695	0.534 U	0,615 U
1,2,3,4,7,8-HxCDF	UG/KG	595	18.5	2.04	4.03	-0.685 U	0.788 1
1,2,3,6,7,8-HxCDF	UG/KG	25	0.801	0.713 U	0.539 U	0.643 U	0.741 (
2,3,4,6,7,8-11xCDF	UG/KG	33.9	1.64	0.546 11	0.413 11	0.493 11	0.567 1
1,2,3,7,8,9-HxCDF	UG/KG	4.73 1	0.294 U	0.334 11	0.252 1)	0.301 U	0.347 1
1,2,3,4,6,7,8-HpCDF	UG/KG	53.9	5.53	0.953	12.2	0.493 U	0.567 (
1,2,3,4,7,8,9-HpCDF	UG/KG	2.26	0.428 U	0.486 U	0.367 U	0.438 U	0.504 U
1,2,3,4,6,7,8,9-OCDF	UG/KG	12.5	3.59	0.911 U	7.46	0.821 U	0.946 L
TOTAL TCDD	UG/KG	2.83 U	0.134 U	0.152 1/	0.115 U	0.137 U	0.158 1
TOTAL PeCDD	UG/KG	5.31 1/	0.749 U	0.85 U	0.642 11	0.767 U	0.883 1
TOTAL HxCDD	UG/KG	3.5	0.401 U	0.455 U	0.344 1)	0.411 U	0.473 (
TOTAL HpCDD	UG/KG	1.89	3.4	0.911 U	1.88	0.821 U	0,946 U
TOTAL TCDF	UG/KG	4260	180	16.5	15.1	0.11 U	0.126 U
TOTAL PeCDF	UG/KG	1780	77.9	5.91	9.02	0.534 1)	0.615 (
TOTAL HxCDF	UG/KG	871	29.2	2.59	7.67	0.301 U	0.347 U
TOTAL UpCDF	UG/KG	67	5.53	0.953	12.2	0.438 U	0.504 1
TOTAL TCDD Equivalents	UG/KG	212.29	8.60	0.61	1.18	0	0

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TABLE 4
YARD AREA SURFACE SOIL SAMPLES

0.6 0 1

Table 4A
Analytical Results - PCBs and Lead
Yard Area Surface Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground surface)		YA-6(0-2) 70141052 A-2 01/08/97 Soil (0-2)	YA-7(0-2) 70141054 A-4 01/08/97 Soil (0-2)	YA-8(0-2) 70141051 A-6 01/08/97 Soil (0-2)	YA-9(0-2) 70141049 A-8 01/08/97 Soil (0-2)	YA-10(0-2) 70141032 A-10 01/08/97 Soil (0-2)	YA-11(0-2) 70141060 A-12 01/08/97 Soil (0-2)
PARAMETERS	UNITS						
PCB's						ALC: TEXT	V = 2.5
Aroclor-1016	UG/KG	810 U	810 U	40 U	800 U	830 U	220 U
Aroclor-1221	UG/KG	810 U	810 U	40 U	800 U	830 U	220 U
Aroclor-1232	UG/KG	810 U	810 U	40 U	800 U	830 U	220 U
Aroclor-1242	UG/KG	810 U	810 U	40 U	800 U	830 U	220 U
Aroclor-1248	UG/KG	810 U	6200	860	17000	6600	1100
Aroclor-1254	UG/KG	810 U	810 U	40 U	800 U	830 U	220 U
Aroclor-1260	UG/KG	14000	7800	620	7900	7400	1400
METALS							
Lead	MG/KG	2510	4280	1030	1410	14000	1120

Table 4A (cont.)
Analytical Results - PCBs and Lead
Yard Area Surface Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground surface)		YA-12(0-2) 70141033 A-15 01/08/97 Soil (0-2)	YA-13(0-2) 70141034 A-16 01/08/97 Soil (0-2)	BBD-D3 70141028 A-16 01/08/97 Soil (YA-13(0-2))	YA-14(0-2) 70141065 A-18 01/08/97 Soil (0-2)	YA-15(0-2) 70141055 C-3 01/08/97 Soil (0-2)	YA-16(0-2) 70141050 C-7 01/08/97 Soil (0-2)
PARAMETERS	UNITS						
PCB's							
Aroclor-1016	UG/KG	400 U	850 U	820 U	150 U	200 U	400 U
Aroclor-1221	UG/KG	400 U	850 U	820 U	150 U	200 U	400 U
Aroclor-1232	UG/KG	400 U	850 U	820 U	150 U	200 U	400 U
Aroclor-1242	UG/KG	400 U	850 U	820 U	150 U	200 U	400 U
Aroclor-1248	UG/KG	3300	12000	8300	820	1000	2100
Aroclor-1254	UG/KG	400 U	850 U	820 U	150 U	200 U	400 U
Aroclor-1260	UG/KG	1600	7600	7400	1900	1400	4200
METALS	D 12 14 1						
Lead	MG/KG	4090	5230	3920	1520	4580	2670

Table 4A (cont.)
Analytical Results - PCBs and Lead
Yard Area Surface Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground surface)		YA-17(0-2) 70141053 C-9 01/08/97 Soil (0-2)	YA-18(0-2) 70141057 C-11 01/08/97 Soil (0-2)	YA-19(0-2) 70141038 C-15 01/08/97 Soil (0-2)	YA-20(0-2) 70141056 D-3 01/08/97 Soil (0-2)	YA-21(0-2) 70141040 D-11 01/08/97 Soil (0-2)	YA-22(0-2) 70141058 E-4 01/08/97 Soil (0-2)
PARAMETERS	UNITS				1		
PCB's							
Aroclor-1016	UG/KG	820 U	900 U	780 U	390 U	440 U	4000 U
Aroclor-1221	UG/KG	820 U	900 U	780 U	390 ()	440 U	4000 U
Aroclor-1232	UG/KG	820 U	900 U	780 U	390 11	440 11	4000 U
Aroclor-1242	UG/KG	820 U	900 U	780 U	390 U	440 U	4000 U
Aroclor-1248	UG/KG	6700	7300	3300	390 U	440 U	6000
Aroclor-1254	UG/KG	820 U	900 U	780 U	390 U	440 U	4000 U
Aroclor-1260	UG/KG	1400	3100	2300	2500	1400	15000
METALS							
Lead	MG/KG	532.	2350	2100	198000	1680	901.

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Blasland, Bouck & Lee Sample I Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground		YA-23(0-2) 70141059 E-6 01/08/97 Soil (0-2)	YA-24(0-2) 70141041 E-8 01/08/97 Soil (0-2)	YA-25(0-2) 70141043 E-10 01/08/97 Soil (0-2)	YA-26(0-2) 70141064 E-15 01/08/97 Soil (0-2)	YA-27(0-2) 70141061 IE-17 01/08/97 Soil (0-2)	YA-28(0-2) 70141031 F-3 01/08/97 Soil (0-2)
PARAMETERS	UNITS						
PCB's						1	
Aroclor-1016	UG/KG	840 U	900 U	460 U	770 U	410 U	840 U
Aroclor-1221	UG/KG	840 U	900 U	460 U	770 U	410 U	840 U
Aroclor-1232	UG/KG	840 U	900 U	460 U	770 U	410 U	840 U
Aroclor-1242	UG/KG	840 U	900 U	460 U	770 U	410 11	840 U
Aroclor-1248	UG/KG	19000	3700	2600	1800	5000	840 U
Aroclor-1254	UG/KG	840 U	900 U	460 U	770 U	410 LJ	840 U
Aroclor-1260	UG/KG	3500	1200	1800	2300	1400	11000
METALS		1-37					
Lead	MG/KG	3370	237.	1910	563.	1350	3120

Blasland, Bouck & Lee Sample Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below groun		YA-29(0-2) 70141035 F-6 01/08/97 Soil (0-2)	YA-29(0-2)DL 70141035DL F-6 01/08/97 Soil (0-2)	YA-30(0-2) 70141044 F-12 01/08/97 Soil (0-2)	YA-31(0-2) 70141039 G-4 01/08/97 Soil (0-2)	YA-32(0-2) 70141045 G-10 01/08/97 Soil (0-2)	YA-32(0-2)DL 70141045DL G-10 01/08/97 Soil (0-2)
PARAMETERS	UNITS	7					
PCB's							
Aroclor-1016	UG/KG	900 U	9000 U	38 U	740 U	430 11	2100 11
Aroclor-1221	UG/KG	900 U	9000 U	38 U	740 U	430 11	2100 U
Aroclor-1232	UG/KG	900 U	9000 U	38 U	740 U	430 U	2100 U
Aroclor-1242	UG/KG	900 U	9000 U	38 U	740 U	430 U	2100 U
Aroclor-1248	UG/KG	9200	14000 D	260	2700	5500	5100 D
Aroclor-1254	UG/KG	900 U	9000 U	38 U	740 U	430 U	2100 U
Aroclor-1260	UG/KG	41000 E	52000 D	390	4300	22000 E	29000 D
METALS						A LONG TO THE REAL PROPERTY.	
Lead	MG/KG	9350		455.	3230	10700	

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground surface)		YA-33(0-2) 70141047 G-14 01/08/97 Soil (0-2)	YA-34(0-2) 70141062 G-16 01/08/97 Soil (0-2)	YA-35(0-2) 70141048 G-18 01/08/97 Soil (0-2)	YA-36(0-2) 70141063 H-18 01/08/97 Soil (0-2)	YA-37(0-2) 70141001 H-8 01/09/97 Soil (0-2)
PARAMETERS	UNITS					
PCB's				V - X - 2' - 3 -		
Aroclor-1016	UG/KG	770 U	830 U	200 U	780 U	760 U
Aroclor-1221	UG/KG	770 U	830 U	200 U	780 U	760 U
Aroclor-1232	UG/KG	770 U	830 U	200 U	780 U	760 U
Aroclor-1242	UG/KG	770 U	830 U	200 U	780 U	760 U
Aroclor-1248	UG/KG	9800	5400	1800	6100	11000
Aroclor-1254	UG/KG	770 U	830 U	200 U	780 U	760 U
Aroclor-1260	UG/KG	4000	2200	670	4300	950
METALS	LE COL		II-SALE			
Lead	MG/KG	1620	1520	1450	1450	5680

Blasland, Bouck & Lee Sample I Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground		YA-38(0-2) 70141016 I-5 01/08/97 Soil (0-2)	YA-39(0-2) 70141018 I-7 01/08/97 Soil (0-2)	YA-40(0-2) 70141020 I-9 01/08/97 Soil (0-2)	YA-40(0-2)DL 70141020DL I-9 01/08/97 Soil (0-2)	YA-41(0-2) 70141042 1-11 01/08/97 Soil (0-2)	YA-42(0-2) 70141046 I-13 01/08/97 Soil (0-2)
PARAMETERS	UNITS						
PCB's	1		I I was a constant				
Aroclor-1016	UG/KG	3900 U	4200 U	20000 U	200000 U	780 U	440 U
Aroclor-1221	UG/KG	3900 U	4200 U	20000 U	200000 U	780 11	440 U
Aroclor-1232	UG/KG	3900 U	4200 U	20000 U	200000 1)	780 11	440 U
Aroclor-1242	UG/KG	3900 U	4200 U	20000 U	200000 ()	780 11	440 U
Aroclor-1248	UG/KG	13000	160000	1200000 E	1600,000 13	5800	6600
Aroclor-1254	UG/KG	3900 U	4200 U	20000 U	200000 U	780 U	440 U
Aroclor-1260	UG/KG	5500	22000	71000	200000 U	17000	13000
METALS							I Annua
Lead	MG/KG	2890	2100	7870		8730	1860

Blasland, Bouck & Lee Sample Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below groun		YA-43(0-2) 70141019 I-15 01/08/97 Soil (0-2)	YA-43(0-2)DL 70141019DL 1-15 01/08/97 Soil (0-2)	YA-44(0-2) 70141002 I-17 01/09/97 Soil (0-2)	YA-45(0-2) 70141003 I-19 01/09/97 Soil (0-2)	YA-46(0-2) 70141017 J-6 01/08/97 Soil (0-2)	YA-47(0-2) 70141021 K-8 01/08/97 Soil (0-2)
PARAMETERS	UNITS						
PCB's							
Aroclor-1016	UG/KG	390 U	2000 U	42 U	41 U	350 U	720 U
Aroclor-1221	UG/KG	390 U	2000 U	42 U	41 U	350 U	720 U
Aroclor-1232	UG/KG	390 U	2000 U	42 U	41 U	350 U	720 U
Aroclor-1242	UG/KG	390 U	2000 U	42 U	41 U	350 U	720 U
Aroclor-1248	UG/KG	24000 E	30000 D	340	1100	2800	14000
Aroclor-1254	UG/KG	390 U	2000 U	42 U	41 U	350 U	720 U
Aroclor-1260	UG/KG	6200	7900 D	600	470	970	900
METALS						10	
Lead	MG/KG	2160		1270	1440	143,	141.

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground surface)		YA-48(0-2) 70141027 K-12 01/08/97 Soil (0-2)	YA-48(0-2)DL 70141027DL K-12 01/08/97 Soil (0-2)	YA-49(0-2) 70141004 K-14 01/09/97 Soil (0-2)	YA-50(0-2) 70141005 K-16 01/09/97 Soil (0-2)	YA-51(0-2) 70141006 K-20 01/09/97 Soil (0-2)	
PARAMETERS	UNITS						
PCB's							
Aroclor-1016	UG/KG	780 U	9700 U	1100 U	1100 U	750 U	
Aroclor-1221	UG/KG	780 U	9700 U	1100 U	1100 U	750 U	
Aroclor-1232	UG/KG	780 U	9700 U	1100 U	1100 U	750 U	
Aroclor-1242	UG/KG	780 U	9700 U	1100 U	1100 1)	750 11	
Aroclor-1248	UG/KG	84000 E	140000 D	2200	1100 U	19000	
Aroclor-1254	UG/KG	780 U	9700 U	1100 U	1100 U	750 U	
Aroclor-1260	UG/KG	25000	30000 D	3900	5300	7100	
METALS							
Lead	MG/KG	3320		4650	2470	1380	

Blasland, Bouck & Lee Sample I Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below groun		YA-52(0-2) 70141022 L-9 01/08/97 Soil (0-2)	YA-52(0-2)DL 70141022DL L-9 01/08/97 Soil (0-2)	YA-53(0-2) 70141025 L-12 01/08/97 Soil (0-2)	YA-53(0-2)DL 70141025DL L-12 01/08/97 Soil (0-2)	YA-54(0-2) 70141007 L-16 01/09/97 Soil (0-2)	YA-55(0-2) 70141008 L-18 01/09/97 Soil (0-2)	YA-55(0-2)DL 70141008DL 118 01/09/97 Soil (0-2)
PARAMETERS	UNITS							
PCB's	1							
Aruclor-1016	UG/KG	720 U	7200 U	40000 U	200000 U	810 11	760 U	7600 U
Aroclor-1221	UG/KG	720 U	7200 U	40000 U	200000 U	810 1)	760 11	7600 U
Aroclor-1232	UG/KG	720 U	7200 U	40000 U	200000 U	810 U	760 U	7600 U
Aroclor-1242	UG/KG	720 U	7200 U	40000 U	200000 U	810 U	760 U	7600 U
Aroclor-1248	UG/KG	51000 E	68000 D	1800000 E	3400,000 D	16000	57000 E	74000 D
Aroclor-1254	UG/KG	720 U	7200 U	40000 U	200000 U	810 U	760 U	7600 U
Aroclor-1260	UG/KG	4000	3700 JD	87000	120000 JD	7100	8900	9100 D
METALS							110	
Lead	MG/KG	515.		6480		6330	3330	

Blasland, Bouck & Lee Sample Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below groun		YA-56(0-2) 70141026 M-11 01/08/97 Soil (0-2)	BBD-D4 70141029 M-11 01/08/97 Soil (YA-56(0-2))	YA-57(0-2) 70141009 M-13 01/09/97 Soil (0-2)	BBD-D5 70141013 M-13 01/09/97 Soil (YA-57(0-2))	YA-58(0-2) 70141010 M-15 01/09/97 Soil (0-2)
PARAMETERS	UNITS					
PCB's						
Aroclor-1016	UG/KG	750 U	750 U	740 U	1800 U	740 U
Aroclor-1221	UG/KG	750 U	750 U	740 U	1800 U	740 U
Aroclor-1232	UG/KG	750 U	750 U	740 U	1800 U	740 U
Aroclor-1242	UG/KG	750 U	750 U	740 U	1800 U	740 U
Aroclor-1248	UG/KG	30000	30000	25000	38000	23000
Aroclor-1254	UG/KG	750 U	750 U	740 U	1800 U	740 U
Aroclor-1260	UG/KG	2400	2500	3200	5100	5700
METALS						
Lead	MG/KG	116.	231.	597.	340.	1110

Table 4B
Analytical Results - Dioxins/Dibenzofurans
Yard Area Surface Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location		YA-6(0-2) 70141052 A-2	YA-7(0-2) 70141054 A-4	YA-8(0-2) 70141051 A-6	YA-9(0-2) 70141049 A-8	YA-10(0-2) 70141032 A-10	YA-11(0-2) 70141060 A-12	YA-12(0-2) 70141033 A-14
Sampling Date Sample Matrix	a.	01/08/97 Soil	01/08/97 Soil	01/08/97 Soil	01/08/97 Soil	01/08/97 Soil	01/08/97 Soil	01/08/97 Soil
Sample Depth (feet below ground surface	e)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)
PARAMETERS	UNITS					: 14	1	
DIOXINS/DIBENZOFURANS					7			
2,3,7,8-TCDD	UG/KG	0.12 U	0.133	0.119 U	1.29 U	0.704 U	0.135 U	0.124 U
1,2,3,7,8-PeCDD	UG/KG	1.6 U	22.2 U	0.666 U	1.78 U	1.23 U	0.758 U	0.695 U
1,2,3,4,7,8-11xCDD	UG/KG	0.466 U	.0,488 U	0.464 U	3.09 11	1.9 U	0.528 U	0.484 U
1,2,3,6,7,8-11xCDD	UG/KG	0,418 U	0.463	0.417 11	2.57 11	1.53 U	0.474 U	0.435 U
1,2,3,7,8,9-HxCDD	UG/KG	0.359 U	0.376 U	0.357 U	2.65 U	1.63 U	0.406 U	0.372 U
1,2,3,4,6,7,8-HpCDD	UG/KG	2.17	2.81	0.714 U	2.44	1.91	0.812 U	0.745 1
1,2,3,4,6,7,8,9-OCDD	UG/KG	9.28	9.65	1.31	3.95 U	24.2	1.36	1.51
2,3,7,8-TCDF	UG/KG	1.74	5.94	1.75	119	9.94	0.108 U	4.34
1,2,3,7,8-PeCDF	UG/KG	1.06	4.75	0.488 U	4.64	7.21	1.64	0.621
2,3,4,7,8-PeCDF	UG/KG	0.466 U	8.62	0.464 U	17.9	7.55	5.11	2.03
1,2,3,4,7,8-HxCDF	UG/KG	0.598 U	57.4	1.75	81.4	373	2.38	5.71
1,2,3,6,7,8-HxCDF	UG/KG	6.34	9.92	0.559 U	3.4	50.6	0.636 U	0.584 U
2,3,4,6,7,8-HxCDF	UG/KG	0.865	1.88	0.428 U	1.42 U	6.3	0.487 U	0.447 L
1,2,3,7,8,9-HxCDF	UG/KG	0.263 U	0.275 U	0.262 U	1.53 U	1.39 U	0.298 U	0.273 L
1,2,3,4,6,7,8-HpCDF	UG/KG	373	307	4.39	108	624	6.83	5.77
1,2,3,4,7,8,9-HpCDF	UG/KG	2.1	3.52	0.381 U	1.51	7.53	0.433 U	0.397 1.
1,2,3,4,6,7,8,9-OCDF	UG/KG	551	275	3.58	2.64 U	721	4.68	6.59
TOTAL TCDD	UG/KG	0.216	0.671	0.119 U	1.29 U	1.7	0.135 U	0.124 L
TOTAL PeCDD	UG/KG	1.6 U	22.2 U	0.666 U	1.78 U	2.84	0.758 U	0.695 L
TOTAL HxCDD	UG/KG	1.67	4.06	0.357 U	2.57 U	4.83	0.406 U	0.372 U
TOTAL HpCDD	UG/KG	3.15	4,33	0.714 U	2.44	1.91	0.812 U	0.745 L
TOTAL TCDF	UG/KG	8.74	20.1	7.31	587	80.8	0.108 U	19,4
TOTAL PeCDF	UG/KG	24.1	113	3.25	290	155	51.5	22
TOTAL HXCDF	UG/KG	41.1	122	2.73	117	770	3.93	8.5
TOTAL HPCDF	UG/KG	381	317	4.39	110	784	6.83	5.77
TOTAL TCDD Equivalents	UG/KG	5.28	15.66	0.40	30.68	55.20	2,95	2.12

Table 4B (cont.)

Analytical Results - Dioxins/Dibenzofurans
Yard Area Surface Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID		YA-13(0-2)	BBD-D3	YA-14(0-2)	YA-15(0-2)	YA-16(0-2)	YA-17(0-2)	YA-18(0-2)
Laboratory Sample Number		70141034	70141028	70141065	70141055	70141050	70141053	70141057
Grid Location		A-16	A-16	A-18	C-3	C-7	C-9	C-11
Sampling Date		01/08/97	01/08/97	01/08/97	01/08/97	01/08/97	01/08/97	01/08/97
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth (feet below ground surface	e)	(0-2)	(YA-13(0-2))	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)
PARAMETERS	UNITS	i						
DIOXINS/DIBENZOFURANS								
2,3,7,8-TCDD	UG/KG	0.102 U	0.128 U	0.115 U	0.13 U	0.0969 U	0.118 U	0.134 L
1,2,3,7,8-PeCDD	UG/KG	0.931 U	0.718 U	0.645 ()	2.62 U	0.885 U	0.662 U	0.753 U
1,2,3,4,7,8-HxCDD	UG/KG	0.319 U	0.5 U	0.449 U	0.505 U	0.303 U	0.461 U	0.524 U
1,2,3,6,7,8-HxCDD	UG/KG	0.472 U	0.449 U	0.403 U	0.453 U	0.448 U	0.414 U	0.471 L
1,2,3,7,8,9-HxCDD	UG/KG	0.344 U	0.385 U	0.346 U	0.389 U	0.327 U	0.355 U	0,403 L
1,2,3,4,6,7,8-HpCDD	UG/KG	4.11	1.8	0.727	1.63	2.06	0.71 U	1.39
1,2,3,4,6,7,8,9-OCDD	UG/KG	17.9	11.8	5.04	6.25	20.9	0.861	9.29
2,3,7,8-TCDF	UG/KG	10.9	16.3	2.04	1.22	6.58	2.87	5.09
1,2,3,7,8-PeCDF	UG/KG	0.485 U	1.26	0.472 U	1.12	0.46 U	0.485 U	0.551 1
2,3,4,7,8-PeCDF	UG/KG	3.62	3.77	0.837	1.77	1.6	0.538	0.872
1,2,3,4,7,8-HxCDF	UG/KG	30.7	52.2	12.5	32.1	7.79	3.16	12.3
1,2,3,6,7,8-HxCDF	UG/KG	5.4	6.08	1,86	5.16	1.11 U	0.556 U	1.68
2,3,4,6,7,8-HxCDF	UG/KG	0.868 U	1.52	0.415 U	0.861	0.824 U	0.426 U	0.484 (
1,2,3,7,8,9-HxCDF	UG/KG	0.931 U	0.663	0,253 U	0.285 U	0.885 U	0.26 U	0.296 1
1,2,3,4,6,7,8-HpCDF	UG/KG	151	151	53.3	277	23.4	4.92	36.1
1,2,3,4,7,8,9-HpCDF	UG/KG	2.33	1.79	0.857	8.04 U	0.618 U	0.379 U	0.59
1,2,3,4,6,7,8,9-OCDF	UG/KG	525	683	57.4	280	19.8	2.78	29.7
TOTAL TCDD	UG/KG	0.152	0.254	0.115 U	36.2	48.3	0.118 U	0.134 t
TOTAL PeCDD	UG/KG	1.15	0.718 U	0.645 U	2.62 U	0.885 U	0.662 1)	0.753 1
TOTAL HxCDD	UG/KG	1.96	3.83	0.346 U	0.94	1.1	0,355 1/	0,403 L
TOTAL HpCDD	UG/KG	4.11	1.8	0.727	1.63	4.06	0.71 U	2.26
TOTAL TCDF	UG/KG	54.5	82.8	12.3	6.52	29.9	8.66	26.6
TOTAL PeCDF	UG/KG	43.8	52.4	23,5	24	18.1	3.83	5.94
TOTAL HxCDF	UG/KG	74	110	26.9	67.9	14.5	3.71	23.1
TOTAL HpCDF	UG/KG	170	156	56.2	280	24.9	5.33	37.9
TOTAL TCDD Equivalents	UG/KG	8.63	11,87	2.67	7.95	2.53	0.92	2.76

Table 4B (cont.)

Analytical Results - Dioxins/Dibenzofurans
Yard Area Surface Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

iii.

Blasland, Bouck & Lee Sample ID Laboratory Sample Number		YA-19(0-2) 70141038 C-15	YA-20(0-2) 70141056	YA-21(0-2) 70141040	YA-22(0-2) 70141058	YA-23(0-2) 70141059	YA-24(0-2) 70141041	YA-25(0-2) 70141043
Grid Location		The state of the s	D-3	D-11	E-4	E-6	E-8	E-10
Sampling Date		01/08/97	01/08/97	01/08/97	01/08/97	01/08/97	01/08/97	01/08/97
Sample Matrix Sample Depth (feet below ground surface		Soil (0-2)	Soif (0-2)	Soif (0-2)	Soil	Soil	Soil	Soil
Sample Depth (feet below ground surface	=)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)
PARAMETERS	UNITS	1						
DIOXINS/DIBENZOFURANS					· hanner			
2,3,7,8-TCDD	UG/KG	1.77 U	0.516 U	0.103 U	1.68 U	0.124 U	0.0994 U	0.108 U
1,2,3,7,8-PeCDD	UG/KG	2.45 U	0.708 U	0.94 U	3.13 U	0.693 U	0.907 U	0.984 U
1,2,3,4,7,8-HxCDD	UG/KG	5.11 U	0,487 U	0.322 U	2.85 U	0.483 U	0.311 11	0.337 U
1,2,3,6,7,8-HxCDD	UG/KG	4.21 U	0.481	0.476 U	2.31 U	0.433 U	0.46 U	0.499 U
1,2,3,7,8,9-HxCDD	UG/KG	4.35 U	0.375 U	0.348 U	2.39 U	0.371 U	0.336 17	0.364 U
1,2,3,4,6,7,8-HpCDD	UG/KG	6.77 U	3.22	1.03 U	4.04 U	2.34	0.994 U	1.08 U
1,2,3,4,6,7,8,9-OCDD	UG/KG	6.44	7.81	1.37	15.2	7.59	0.98	4,36
2,3,7,8-TCDF	UG/KG	4.57	3.65	0.127	13.3	29.3	0.087 U	3.5
1,2,3,7,8-PeCDF	UG/KG	1.4 U	2.55	0.489 U	1,15 U	2.94	0.472 U	0.512 L
2,3,4,7,8-PeCDF	UG/KG	1.13 U	4.69	0.824 U	1.14 U	7.54	0.796 U	0.863 U
1,2,3,4,7,8-HxCDF	UG/KG	8.77	68.2	2.09	2460	29.5	1.63	2.9
1,2,3,6,7,8-HxCDF	UG/KG	1.18 U	11.1	1.18 U	297	3.09	1.14 U	1.24 U
2,3,4,6,7,8-HxCDF	UG/KG	1.63 U	1.87	0.875 U	0.604 U	1.99	0,845 U	0.917 U
1,2,3,7,8,9-HxCDF	UG/KG	1.82 U	0.275 U	0.94 U	0.671 U	0.272 U	0.907 U	0.984 L
1,2,3,4,6,7,8-HpCDF	UG/KG	33.9	428	7.83	22100	57.1	3.57	6.62
1,2,3,4,7,8,9-HpCDF	UG/KG	2.39 U	6.13	0.657 U	34.6	1	0.634 U	0.688 U
1,2,3,4,6,7,8,9-OCDF	UG/KG	14.3	701	5.04	44200	46.8	0.808 U	5.94
TOTAL TCDD	UG/KG	1.77 U	0.669	0.103 U	1.68 U	0.124 U	0.0994 U	20.2
TOTAL PeCDD	UG/KG	2.45 U	12.5	0.94 U	3.13 U	0.693 U	0.907 U	0.984 U
TOTAL HxCDD	UG/KG	4.21 U	2.9	0.322 U	2.31 U	1.33	0.311 U	0.337 U
TOTAL HPCDD	UG/KG	6.77 U	4.79	1.03 U	4.04 U	4	0.994 U	1.08 U
TOTAL TCDF	UG/KG	12.2	19.6	0.399	23.3	130	2.06	15.2
TOTAL PeCDF	UG/KG	9.49	57.4	0.539	689	101	2.38	6.92
TOTAL HxCDF	UG/KG	8.77	144	3.94	5520	54	1.63	4.71
TOTAL HpCDF	UG/KG	37.4	525	9.33	25300	60	3,57	6,62
TOTAL TCDD Equivalents	UG/KG	1.69	16.08	0.31	542.59	10.96	0.20	0.72

Table 4B (cont.) Analytical Results - Dioxins/Dibenzofurans Yard Area Surface Soil Samples Bayonne Barrel and Drum Site Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location		YA-26(0-2) 70141064 E-15	YA-27(0-2) 70141061 E-17	YA-28(0-2) 70141031 F-3	YA-29(0-2) 70141035 F-6	YA-30(0-2) 70141044 F-12	YA-31(0-2) 70141039 G-4	YA-32(0-2) 70141045 G-10
Sampling Date Sample Matrix		01/08/97 Soil	01/08/97 Soil	01/08/97 Soil	01/08/97 Soil	01/08/97 Soil	01/08/97 Soil	01/08/97 Soil
Sample Depth (feet below ground surface	2)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)
PARAMETERS	UNITS				W			
DIOXINS/DIBENZOFURANS								
2,3,7,8-TCDD	UG/KG	0.114 U	0.12 U	0.129 U	1.78 U	0.091 U	1,63 U	0.1 U
1,2,3,7,8-PeCDD	UG/KG	0.636 U	0.673 U	0.72 U	2.46 U	0.83 U	2.26 U	1.49
1,2,3,4,7,8-HxCDD	UG/KG	0.443 U	0.469 U	0.502 U	3.55 U	0.284 U	2.87 U	0.313 U
1,2,3,6,7,8-HxCDD	UG/KG	0.398 U	0.421 U	0.45 U	2.92 U	0.421 U	2.36 U	0.463 U
1,2,3,7,8,9-HxCDD	UG/KG	0.341 U	0.361 U	0.386 U	3.02 U	0.307 U	2.44 1/	0.338 1/
1,2,3,4,6,7,8-HpCDD	UG/KG	0.682 U	0.721 U	0.898	4.7 U	0.91 U	3.8 U	1 U
1,2,3,4,6,7,8,9-OCDD	UG/KG	3.19	3.53	20.7	15.6	0.989	30.3	3.51
2,3,7,8-TCDF	UG/KG	0.459	8.2	0.7	20.8	0.0796 U	0.853 U	0.0875 U
1,2,3,7,8-PeCDF	UG/KG	0.466 U	0.493 U	0.527 U	1.26 U	0.432 U	1,01 U	1.36
2,3,4,7,8-PeCDF	UG/KG	0.443 U	0,469 U	0,502 U	6.26	0.728 U	0.814 U	2
1,2,3,4,7,8-HxCDF	UG/KG	0.568 U	4.33	2.65	1.61 U	1.04 U	8.92	5.11
1,2,3,6,7,8-HxCDF	UG/KG	0.534 U	0.565 U	3.01	5.81	1.05 U	0.678 U	1.15 U
2,3,4,6,7,8-HxCDF	UG/KG	0.409 U	0.433 U	0.982	3.24	0.774 U	0.933 U	0.85 U
1,2,3,7,8,9-HxCDF	UG/KG	0.25 U	0.264 U	1.3	1.47	0.83 U	1.05 U	0.913 U
1,2,3,4,6,7,8-HpCDF	UG/KG	7.32	4.17	67.7	177	3.97	70.2	7.73
1,2,3,4,7,8,9-HpCDF	UG/KG	0.364 U	0.385 U	0.625	1.92	0.58 U	1.21	0.638 U
1,2,3,4,6,7,8,9-OCDF	UG/KG	5.44	3.47	119	256	1.85 U	123	32.4
TOTAL TCDD	UG/KG	0.114 U	0.12 U	0.129 U	8.54	0.091 U	1.63 U	21.2
TOTAL PeCDD	UG/KG	0.636 U	0.673 U	0.72 U	4.6	0.83 U	2.26 U	1.49
TOTAL HxCDD	UG/KG	0.341 U	0.361 U	1.68	20.5	0.284 U	2.36 U	0.313 U
TOTAL HpCDD	UG/KG	0.682 U	0,721 U	0.898	2.52	0.91 U	3.8 U	10
TOTAL TCDF	UG/KG	1.68	38.4	3.06	173	0.0796 U	0.853 U	5.17
TOTAL PeCDF	UG/KG	2.84	5.61	5.9	126	0.432 U	2.25	13.2
TOTAL HxCDF	UG/KG	2.65	6.27	28.1	86.3	0.774 U	15.8	8.89
TOTAL HpCDF	UG/KG	8.91	4.17	80.4	196	3.97	71.4	8.53
TOTAL TCDD Equivalents	UG/KG	0.128	1.302	1.70	8.32	0.04	1.76	2.44

Table 4B (cont.) Analytical Results - Dioxins/Dibenzofurans Yard Area Surface Soil Samples Bayonne Barrel and Drum Site Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location	YA-33(0-2) 70141047 G-14	YA-34(0-2) 70141062 G-16	YA-35(0-2) 70141048 G-18	YA-36(0-2) 70141063 11-18	YA-37(0-2) 70141001 11-8	YA-38(0-2) 70141016	YA-39(0-2) 70141018 I-7	
Sampling Date		01/08/97	01/08/97	01/08/97	01/08/97	01/09/97	1-5 01/08/97	01/08/97
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth (feet below ground surface	2)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)
PARAMETERS	UNITS							
DIOXINS/DIBENZOFURANS								
2,3,7,8-TCDD	UG/KG	0.0933 U	0.122 U	0.0929 U	0.117 U	0.114 U	0.209	0.515 L
1,2,3,7,8-PeCDD	UG/KG	0.851 U	0.68 U	0.847 U	0.653 U	0.638 U	1.43	0.897 L
1,2,3,4,7,8-HxCDD	UG/KG	0.291 U	0.474 U	0.29 U	0.454 U	0.444 U	0.914	1.96 U
1,2,3,6,7,8-HxCDD	UG/KG	0.431 U	0.425 U	0.429 U	0.408 U	0.399 ()	1.93	1.58 1
1,2,3,7,8,9-HxCDD	UG/KG	0.315 U	0.365 U	0.313 U	0.35 11	0.342 U	2.31	1.68 1
1,2,3,4,6,7,8-I-IpCDD	UG/KG	2.22	0.734	0.998	1.14	0.683 U	79	1.89
1,2,3,4,6,7,8,9-OCDD	UG/KG	10.2	6.54	11.3	10.1	2.94	696	6.98
2,3,7,8-TCDF	UG/KG	5.1	2.1	5.47	1.76	14.3	7.86	189
1,2,3,7,8-PeCDF	UG/KG	0.443 U	0.498 U	0.441 U	0.478 U	0.467 U	1.89	49.7
2,3,4,7,8-PeCDF	UG/KG	1.66	0.474 U	1.48	1.06	2.98	5.17	36.1
1,2,3,4,7,8-HxCDF	UG/KG	5.64	2.59	4.37	0.583 U	6.44	50.4	283
1,2,3,6,7,8-HxCDF	UG/KG	1.07 U	0.571 U	1.07 U	0.548 U	0.535 U	6.59	23.2
2,3,4,6,7,8-HxCDF	UG/KG	0.793 U	0.437 U	0.789 U	0.42 U	0.46	2.2	13.5
1,2,3,7,8,9-HxCDF	UG/KG	0.851 U	0.267 U	0.847 U	0.256 U	0,251 U	0.252 U	1.37 (
1,2,3,4,6,7,8-HpCDF	UG/KG	16.5	8.47	5.97	1.62	3.03	167	465
1,2,3,4,7,8,9-HpCDF	UG/KG	0.595 U	0.389 U	0.592 U	0.373 U	0.364 U	2.79	3.97
1,2,3,4,6,7,8,9-OCDF	UG/KG	40.1	5.76	4.66	1.06	1.94	130	2.22
TOTAL TCDD	UG/KG	28.9	0.122 U	12	0.117 U	0.114 U	4,71	0.515 L
TOTAL PeCDD	UG/KG	0.851 U	0.68 U	0.847 U	0.653 U	0.638 U	14	2,48
TOTAL HxCDD	UG/KG	0.582	0.365 U	0.557	0.355	0.342 U	25.8	1.07
TOTAL HpCDD	UG/KG	2.22	0.734	0.998	2.02	0.683 U	167	1.89
TOTAL TCDF	UG/KG	23.8	8.06	25.6	5.28	66.5	40	1010
TOTAL PeCDF	UG/KG	16.1	5.71	14.5	14.5	19.2	65.5	513
TOTAL HxCDF	UG/KG	10.6	4.41	7.22	0.943	9.52	108	558
TOTAL HpCDF	UG/KG	18.7	8.47	6.78	1.62	3.03	174	532
TOTAL TCDD Equivalents	UG/KG	2.14	0.57	1.81	0.74	3.65	14.14	76.12

Table 4B (cont.)
Analytical Results - Dioxins/Dibenzofurans
Yard Area Surface Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location	YA-40(0-2) 70141020 I-9	YA-41(0-2) 70141042 I-11	YA-42(0-2) 70141046 I-13	YA-43(0-2) 70141019 I-15	Y A-44(0-2) 70141002 I-17	YA-45(0-2) 70141003 1-19	YA-46(0-2) 70141017 J-6	
Sampling Date		01/08/97	01/08/97	01/08/97	01/08/97	01/09/97	01/09/97	01/08/97
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth (feet below ground surfac	e)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)
PARAMETERS	UNITS				17.00			
DIOXINS/DIBENZOFURANS	UNITS		-	-				-
	UG/KG	1.07 U	1.82 U	0.0759	0.112.11	0.12.11	0.110.11	0.0020 11
2,3,7,8-TCDD	UG/KG	1.53 U	2.51 U	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.113 U	0.13 U	0.118 U	0.0828 U
1,2,3,7,8-PeCDD	UG/KG			0.0791	0.634 U	0.726 U	0.663 U	0.756 U
1,2,3,4,7,8-HxCDD	And the Control of the Control	1.18	0.874	0.232	0.442 U	0.505 U	0.462 U	0.259 U
1,2,3,6,7,8-HxCDD	UG/KG UG/KG	1.42 2.49	3.22	0.291	0.396 U	0.453 U	0.414 U	0.383 U
1,2,3,7,8,9-HxCDD	UG/KG	100000	100.00	0.314	0.34 11	0.389 U	0.355 1/	0.28 ()
1,2,3,4,6,7,8-HpCDD		11.5	79.8	3.49	1.85	1.22	0.711 11	0.828 ()
1,2,3,4,6,7,8,9-OCDD	UG/KG	11.2	280	14.3	13.8	8.24	1.75	11.7
2,3,7,8-TCDF	UG/KG	2930	14.8	4.44	5.05	0.104 U	0.0947 U	3.43
1,2,3,7,8-PeCDF	UG/KG	156	2.69	0.421	0.642	0.531 U	0,486 U	0.393 U
2,3,4,7,8-PeCDF	UG/KG	622	9.82	0.948	1.79	0.505 U	0.462 U	0.874
1,2,3,4,7,8-HxCDF	UG/KG	1150	95.2	7.88	5.74	0.648 U	0.592 U	3.67
1,2,3,6,7,8-HxCDF	UG/KG	51.9	18.5	1.7	0.655	0.609 U	0.557 U	0.953 U
2,3,4,6,7,8-HxCDF	UG/KG	99.7	4.31	0.885	0.408 U	0.466 U	0.426 U	0.704 U
1,2,3,7,8,9-HxCDF	UG/K.G	0.949	2.13	0.0246 U	0.249 U	0.285 U	0.261 U	0.756 U
1,2,3,4,6,7,8-HpCDF	UG/KG	285	389	26.7	20.5	0.466 U	0.584	12.6
1,2,3,4,7,8,9-HpCDF	UG/KG	7.52	10.5	0.551	0.362 U	0.415 U	0.379 U	0.528 U
1,2,3,4,6,7,8,9-OCDF	UG/KG	62.2	287	18.3	25.1	0.777 U	0.711 U	11.2
TOTAL TCDD	UG/KG	1.07 U	1.44	0.598	0.113 U	0.13 U	0.118 U	0.0828 U
TOTAL PeCDD	UG/KG	1.53 U	11.5	0.437	0.634 U	0.726 U	0.663 U	0.756 U
TOTAL HxCDD	UG/KG	17.3	32.1	3.62	0.34 U	0.389 U	0.355 U	0.259 U
TOTAL HpCDD	UG/KG	17.6	140	8.65	2.59	1.22	0.711 U	0.828 U
TOTAL TCDF	UG/KG	13400	71.2	21.9	22.2	0.104 U	0.0947 U	8.82
TOTAL PeCDF	UG/KG	6710	149	16.1	21.6	0.505 U	0.462 11	26.1
TOTAL HxCDF	UG/KG	1720	217	22.3	10.7	0.285 U	0.261 U	5.84
TOTAL HpCDF	UG/KG	303	488	29.5	21.2	0.415 U	0.584	13.1
TOTAL TCDD Equivalents	UG/KG	745.68	24.62	2.52	2.33	0.02	0.008	1.30

Table 4B (cont.)

Analytical Results - Dioxins/Dibenzofurans
Yard Area Surface Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location Sampling Date Sample Matrix Sample Depth (feet below ground surface	YA-47(0-2) 70141021 K-8 01/08/97 Soil (0-2)	YA-48(0-2) 70141027 K-12 01/08/97 Soil (0-2)	YA-49(0-2) 70141004 K-14 01/09/97 Soil (0-2)	YA-50(0-2) 70141005 K-16 01/09/97 Soil (0-2)	YA-51(0-2) 70141006 K-20 01/09/97 Soil (0-2)	YA-52(0-2) 70141022 L-9 01/08/97 Soil (0-2)	YA-53(0-2) 70141025 L-12 01/08/97 Soil (0-2)	
PARAMETERS	UNITS							
DIOXINS/DIBENZOFURANS						-		
2,3,7,8-TCDD	UG/KG	0.107 U	0.412 U	0.0952 U	0.121 U	0.11 U	0.108 U	0.838 U
1,2,3,7,8-PeCDD	UG/KG	0.598 U	0.718 U	0.869 U	0.676 U	0.619 U	0.606 U	1.19 U
1,2,3,4,7,8-11xCDD	UG/KG	0.417 U	1.18 U	0.298 U	0.471 U	0.431 U	0.422 U	1.76
1,2,3,6,7,8-HxCDD	UG/KG	0.374 U	0.953 U	0.44 U	0.423 U	0.387 U	0.379 11	1.82
1,2,3,7,8,9-HxCDD	UG/KG	0.32 U	1.01 U	0.321 U	0.362 U	0.331 U	0.325 U	3.76
1,2,3,4,6,7,8-HpCDD	UG/KG	0.641 U	1.8 U	0.952 U	2.74	5.13	0.65 U	16.5
1,2,3,4,6,7,8,9-OCDD	UG/KG	1.32	25.7	5.38	10.7	25.3	2.05	22.9
2,3,7,8-TCDF	UG/KG	31.1	161	1.33	17.9	7.42	44.5	3340
1,2,3,7,8-PeCDF	UG/KG	4.22	43.5	0.452 U	1.43	0.536	4.32	232
2,3,4,7,8-PeCDF	UG/KG	11.6	30.4	0.924	4.23	1.92	11.6	784
1,2,3,4,7,8-HxCDF	UG/KG	18,1	428	17.6	12.1	5.08	25.9	1500
1,2,3,6,7,8-HxCDF	UG/KG	1.16	46.5	2.67	1.15	0.519 U	1.59	65
2,3,4,6,7,8-HxCDF	UG/KG	0.896	12.5	0.809 U	0.735	0.461	1.46	131
1,2,3,7,8,9-HxCDF	UG/KG	0.235 U	4.09	0.869 U	0.266 U	0.243 U	0.674	1.37
1,2,3,4,6,7,8-HpCDF	UG/KG	14.9	839	61.6	33	13.1	19.9	260
1,2,3,4,7,8,9-HpCDF	UG/KG	0.342 U	5.66	0.773	0.496	0.354 U	0.375	9.73
1,2,3,4,6,7,8,9-OCDF	UG/KG	22.5	440	53.5	23.8	8.93	20.8	55.4
TOTAL TCDD	UG/KG	0.107 U	0.412 U	0.0952 U	0.121 U	0.11 U	0.117	0.838 1
TOTAL PeCDD	UG/KG	0.598 U	3.12	0.869 U	1.27	0.619 U	0.606 U	1.19 1
TOTAL HxCDD	UG/KG	0,32 U	0.953 U	0.974	0.362 U	0.493	0.325 U	24.3
TOTAL HpCDD	UG/KG	0.641 U	1.8 U	0.952 U	5.09	8.68	0.65 ()	26.2
TOTAL TCDF	UG/KG	135	914	5.94	85.7	35.3	216	14900
TOTAL PeCDF	UG/KG	140	406	14.8	56.9	27.9	161	86.30
TOTAL HxCDF	UG/KG	28.3	850	37.6	21	9.8	41.5	2210
TOTAL HPCDF	UG/KG	15.4	927	65.8	34.2	13.1	20,9	299
TOTAL TCDD Equivalents	UG/KG	11.31	91.50	3.30	5.77	2.50	13.65	911.01

Table 4B (cont.)

Analytical Results - Dioxins/Dibenzofurans
Yard Area Surface Soil Samples
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Grid Location Sampling Date	YA-54(0-2) 70141007 L-16 01/09/97	YA-55(0-2) 70141008 L-18 01/09/97	YA-56(0-2) 70141026 M-11 01/08/97	BBD-D4 70141029 M-11 01/08/97	YA-57(0-2) 70141009 M-13 01/09/97	BBD-D5 70141013 M-13 01/09/97	YA-58(0-2) 70141010 M-15 01/09/97	
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil (0-2)
Sample Depth (feet below ground surface	e)	(0-2)	(0-2)	(0-2)	(YA-56(0-2))	(0-2)	(YA-57(0-2))	
PARAMETERS	UNITS							
DIOXINS/DIBENZOFURANS								
2,3,7,8-TCDD	UG/KG	0.116 U	0.116 U	0.111 U	0.112 U	0.109 U	0.109 U	0.11 U
1,2,3,7,8-PeCDD	UG/KG	0.649 U	0.649 U	0.622 U	0.629 U	0.61 U	0.611 U	0.617 U
1,2,3,4,7,8-HxCDD	UG/KG	0.452 U	0.452 U	0.433 U	0.438 U	0.425 U	0.426 U	0.43 U
1,2,3,6,7,8-HxCDD	UG/KG	0.474	0.405 U	0.388 U	0.393 U	0.381 U	0.382 U	0.386 1
1,2,3,7,8,9-11xCDD	UG/KG	0.655	0.347 U	0.333 U	0.337 U	0.327 U	0.327 U	0.331 U
1,2,3,4,6,7,8-HpCDD	UG/KG	18.7	14.1	0.666 U	0.674 U	0.826	0.662	5.72
1,2,3,4,6,7,8,9-OCDD	UG/KG	135	99.2	2.68	3,74	3.75	4.3	32.3
2,3,7,8-TCDF	UG/KG	4.47	19	33.8	42	28.8	34.4	30.5
1,2,3,7,8-PeCDF	UG/KG	0.804	1.79	5	2.32	2.66	1.97	2.53
2,3,4,7,8-PeCDF	UG/KG	2.23	6.95	13.1	7.68	9.72	6.99	8.25
1,2,3,4,7,8-HxCDF	UG/KG	9.91	11.3	17.3	61.9	18.4	19.1	16.1
1,2,3,6,7,8-HxCDF	UG/KG	1.47	0.804	1.07	3.43	1.22	1.3	1.26
2,3,4,6,7,8-HxCDF	UG/KG	0.704	1	0.686	4.81	1.45	1.83	1.49
1,2,3,7,8,9-HxCDF	UG/KG	0.255 U	0.255 U	0.337	1.16	0.337	0.24 U	0.242 1
1,2,3,4,6,7,8-HpCDF	UG/KG	36.2	17.3	10.5	15.9	21.4	22.4	33.2
1,2,3,4,7,8,9-HpCDF	UG/KG	0.71	0.371 U	0.355 U	0.36 U	0.349 U	0.349 U	0.533
1,2,3,4,6,7,8,9-OCDF	UG/KG	25	13.8	23.2	12.9	15.9	17.9	23.5
TOTAL TCDD	UG/KG	0.216	0.116 U	0.111 U	0.112 U	0.109 U	0.109 U	0.11 L
TOTAL PeCDD	UG/KG	1.58	0.805	0.622 U	0.629 U	0.61 U	0.611 U	0.617 L
TOTAL HxCDD	UG/KG	6.36	3.36	0.333 U	0.337 U	0.327 U	0.327 U	1.05
TOTAL HPCDD	UG/KG	44.4	35	0.666 U	0.674 U	0.826	0.662	9.95
TOTAL TCDF	UG/KG	22.5	83.6	160	199	137	166	131
TOTAL PeCDF	UG/KG	28.2	80.1	158	101	111	84.1	108
TOTAL HxCDF	UG/KG	23.3	19.2	26.2	99.2	30.5	31.4	28.7
TOTAL HpCDF	UG/KG	38	22.1	10.8	18	21.8	22.8	34.4
TOTAL TCDD Equivalents	UG/KG	3.64	7.20	12.25	15.46	10.26	9.51	9.64

TABLE 5 RINSE BLANKS

Table 5A
Analytical Results - Rinse Blanks
Bayonne Barrel and Drum Site
Newark, New Jersey

Blasland, Bouck & Lee Sample ID Laboratory Sample Number Sampling Date Sample Matrix	BBD-RB-2 70141014 01/09/97 Aqeous	BBD-RB-1 70141030 01/08/97 Aqeous	
PARAMETERS	UNITS		
METALS			
Lead	MG/KG	1.86 U	1.86 U
PCB's			
Aroclor-1016	UG/KG	0.20 U	0.20 U
Aroclor-1221	UG/KG	0.20 U	0.20 U
Aroclor-1232	UG/KG	0.20 U	0.20 U
Aroclor-1242	UG/KG	0.20 U	0.20 U
Aroclor-1248	UG/KG	0.20 U	0.20 U
Aroclor-1254	UG/KG	0.20 U	0.20 U
Aroclor-1260	UG/KG	0.20 U	0.20 U
DIOXINS/DIBENZOFUR			
2,3,7,8-TCDD	UG/KG	0.32 U	0.32 U
1,2,3,7,8-PeCDD	UG/KG	6.4 U	6.4 U
1,2,3,4,7,8-HxCDD	UG/KG	4 U	4 U
1,2,3,6,7,8-HxCDD	UG/KG	1.4 U	1.4 U
1,2,3,7,8,9-HxCDD	UG/KG	2 U	2 U
1,2,3,4,6,7,8-HpCDD	UG/KG	4.1 U	4.1 U
1,2,3,4,6,7,8,9-OCDD	UG/KG	4.4 U	4.4 U
2,3,7,8-TCDF	UG/KG	0.36 U	0.36 U
1,2,3,7,8-PeCDF	UG/KG	5.6 U	5.6 U
2,3,4,7,8-PeCDF	UG/KG	8 U	8 U
1,2,3,4,7,8-HxCDF	UG/KG	7 U	7 U
1,2,3,6,7,8-HxCDF	UG/KG	6.5 U	6.5 U
2,3,4,6,7,8-HxCDF	UG/KG	4.2 U	4.2 U
1,2,3,7,8,9-HxCDF	UG/KG	3.8 U	3.8 U
1,2,3,4,6,7,8-HpCDF	UG/KG	1.4 U	1.4 U
1,2,3,4,7,8,9-HpCDF	UG/KG	4.3 U	4.3 U
1,2,3,4,6,7,8,9-OCDF	UG/KG	2.5 U	2.5 U
TOTAL TCDD	UG/KG	0.32 U	0.32 U
TOTAL PeCDD	UG/KG	6.4 U	6.4 U
TOTAL HxCDD	UG/KG	2.47 U	2.47 U
TOTAL HpCDD	UG/KG	4.1 U	4.1 U
TOTAL TCDF	UG/KG	0.36 U	0.36 U
TOTAL PeCDF	UG/KG	6.8 U	6.8 U
TOTAL HxCDF	UG/KG	5.38 U	5.38 U
TOTAL HpCDF	UG/KG	2.85 U	2.85 U

ATTACHMENT 1
SUMMARY OF SAMPLE DESCRIPTIONS AND FIELD OBSERVATIONS

Sample #	Sample Depth (feet bgs)	PID (ppm)	Sample Description			
urnace Cou	rtyard Area					
FCA-1	0-2	100	No sample description listed in field notes			
FCA-2	0-2	250	Dark brown to black silt (0-1.8); Black fine to medium sandy cinders, organic odor (1.8-2.0)			
7.7	2-4	50	Wet, brown, fine to coarse sand, some small pieces of brick and cement			
	4-6	20	Wet, brown, fine to coarse sand, some small pieces of brick and cement			
FCA-2A	0-2	200	Moist, gray-brown silt and fine sand with gray, pink, blue, red, and purple material			
(F)	2-4	220	Wet, black, red, pink, and white gummy sludge material			
FCA-3	0-2	30	Dark brown to black silt and fine to coarse sand and gravel with fill debris (brick and cement)			
	2-4	150	Dark brown to black silt and fine to coarse sand (2-3); Wet, black, fine to coarse sand, gravel, bricks, wood, and cement			
FCA-4	0-2	20	Dark brown to black, fine to coarse sand, gravel, and cinders			
-	2-4	80	Dark brown and gray silt and fine to coarse sand (2-3); Wet gray silt and fine to coarse sand (3-4)			
	4-6	5.0	Wet, dark brown to black, fine to coarse sand and gravel			
FCA-5	0-1.5	260	Black, gummy sludge material inside FCA building pit			
FCA-6	0-2	20	Dark gray to black silt and fine to medium sand			
	2-4	5.0	Wet, dark brown silt with fine to coarse sand and gravel			
FCA-7	0-2	300	Dark brown to black silt and fine to coarse sand and gravel			
	2-4	200	Black, yellow, pink, and purple gummy sludge material			
FCA-8	0-2	80	Dark brown silt and fine to coarse sand with gravel			
	2-4	120	Moist, black, fine to coarse sand			
	4-6	4.0	Wet, black, fine to coarse sand and gravel			

Sample #	Sample Depth (feet bgs)	PID (ppm)	Sample Description
Storage Tani	k Area		
STA-1	0-2	25	Dark brown and black, fine to coarse sand and gravel
	2-4	60	Wet, brown and black, fine to coarse sand with some clay; strong petro odor
STA-2	0-2	120	Brown and black stained fine sand
	2-4	10.0	Dark brown and black, fine to coarse sand with some wet clay
	4-6	15.0	Black, stained, brown clay with some wet, fine to coarse sand
STA-3	0-2	70	Dark brown and black fine to coarse sand
- 21.21	2-4	100	Dark brown to black fine to coarse sand (2-3); Wet, dark brown to black, clay with some fine to coarse sand, strong petro odor (3-4

Sample #	Sample Depth (feet bgs)	PID (ppm)	Sample Description
ard Area So	oil Boring Samples		
YA-1	0-2	1.2	Brown silt and fine to coarse sand with fill debns (glass, cement, gravel, yellow-green fine material)
	2-4	3.6	Brown to red, brown, black stained, silt and fine to coarse sand with fill debris
	4-6	4.0	Brown to red, brown, black stained, silt and fine to coarse sand with fill debris
	6-8	2.8	Brown to red, brown, black stained, silt and fine to coarse sand with fill debris
1	8-10	3.0	Brown to red, brown, black stained, silt and fine to coarse sand with fill debris
	10-12	3.2	Brown, fine sand with black silt
	12-14	0.6	Brown, fine sand
	14-16	1.2	Brown, fine sand with glass
	16-18	0.8	Wet, brown to black, fine sand with some gray sandy clay
YA-2	0-2	1.6	Brown, orange-brown, fine sand with fill debris (cinders,brick, metal pieces, and gravel), and black staining
	2-4	0.2	Brown, orange-brown, fine sand with fill debris (cinders, brick, metal pieces, and gravel), and black staining
	4-6	0.2	Brown, orange-brown, fine sand with fill debris (cinders, brick, metal pieces, and gravel), and black staining
	6-8	0.4	Brown, fine sand
	8-10	0.6	Moist, brown, fine sand
- 4	10-12	1.0	Wet, brown, fine sand with black staining
YA-3	0-2	10.2	Black stained, brown, fine to coarse sand with fill debris (bricks, gravel, concrete, glass, cinders, and ash)
7.3	2-4	6.8	Black stained, brown, fine to coarse sand and silt with odor
	4-6	2.8	Black stained, brown clay with odor
- 1	6-8	1.8	Wet, black stained, brown clay with odor
YA-4	0-2	0.1	Brown and tan, fine sand with fill debris (glass, metal pieces, brick, and cement) with some black staining
	2-4	0.8	Brown and tan, fine sand with fill debris (glass, metal pieces, brick, and cement) with more black staining
	4-6	18.0	Brown, fine to coarse sand, sand and silt, black staining; strong petro odor
	6-8	16.0	Black stained, brown clay with some fine to coarse sand; strong petro odor
	8-10	10.0	Wet, black stained, brown clay
YA-5	0-2	3.6	Brown, fine to coarse sand with fill debris (cinders, ash, brick, glass, cement, and metal pieces)
100	2-4	3.6	Brown, fine to coarse sand with fill debris (cinders, ash, brick, glass, cement, and metal pieces); some black staining
	4-6	2.4	Brown, fine to coarse sand with fill debris (cinders, ash, brick, glass, cement, and metal pieces); more black staining
	6-8	1.8	Black silt with fine to coarse sand and ash; black staining and strong odor
	8-10	8.0	Wet, black silt with fine to coarse sand

Sample #	Sample Depth (feet bgs)	PID (ppm)	Sample Description
ard Area Si	urface Soil Samples		
YA-6	0-2	0.2	Brown, fine to coarse sand and silt with fill debris (glass, cinders, ash, wood, and bricks)
YA-7	0-2	130	Brown, fine to medium sand with silt and glass; strong odor
YA-8	0-2	2.4	Light brown, fine to medium sand with organic matter (roots and leaves) and fill debris (brick and cinders)
YA-9	0-2	0.1	Brown, fine sand with silt and debris (brick and cinders); slight odor
YA-10	0-2	4.0	Brown, fine sand and silt; black sludge material (petro odor) with fill debris (bricks, glass, metal, and cement)
YA-11	0-2	0.0	Black and brown, fine to medium şand with silt and glass
YA-12	0-2	0.2	Brown, fine sand and silt
YA-13	0-2	2.0	Brown, fine to coarse sand and silt with fill debris (glass, metal, and bricks)
YA-14	0-2	1.6	Fine to medium sand with silt, some organic matter (wood and leaves), and brick
YA-15	0-2	0.2	Brown, fine to medium sand and silt with much fill debris (glass, brick, cement, metal, and some black sludge material (no odor)
YA-16	0-2	2.0	Brown, coarse sand with glass
YA-17	0-2	0.1	Black, coarse sand and fine gravel with ash
YA-18	0-2	0.1	Brown and black, fine to coarse sand with debris (glass, rubber, and a piece of plastic, black clay)
YA-19	0-2	0.0	Black and brown, fine to coarse sand with glass
YA-20	0-2	0.0	Brown to black, medium to coarse sand with cinders
YA-21	0-2	8.0	Brown, fine to coarse sand and gravel; white, coarse, wet, ash material with debris (glass, cement, and bricks)
YA-22	0-2	0.4	Brown, medium to coarse sand with some gravel and glass
YA-23	0-2	1.2	Brown, fine to medium sand with silt and debris (glass, bricks, and concrete)
YA-24	0-2	0.6	Brown to black, medium to coarse sand with cinders; slight odor
YA-25	0-2	1.0	Brown to black, fine to coarse sand with cinder, ash, and some silt
YA-26	0-2	0.0	Brown and black, coarse sand with some gravel
YA-27	0-2	28	Dark brown to black, fine to coarse sand with cinders, ash, and some gravel
YA-28	0-2	0.4	Brown, fine to medium sand with silt and fill debris (brick and glass)
YA-29	0-2	20	Brown, fine to coarse sand with silt and fill debris (bricks and concrete)
YA-30	0-2	4.0	Red-brown clay and black sift with white ash and brick debris
YA-31	0-2	0.6	Brown, medium to coarse sand with fill debris (glass, brick, concrete, and cinders)
YA-32	0-2	0.0	Brown, fine to coarse sand with sift and fill debris (brick and cinders)
YA-33	0-2	0.5	Black and brown, fine sand and brown clay
YA-34	0-2	0.0	Brown to black, fine to coarse sand with debris (glass, brick, and cinders)
YA-35	0-2	1.0	Dark brown, fine to coarse sand with some silt and debris (brick, asphalt, glass, cinders, and ash)
YA-36	0-2	0.6	Dark brown, fine to coarse sand with some silt and debris (cinders, asphalt, and brick)

Sample #	Sample Depth (feet bgs)	PID (ppm)	Sample Description
ard Area Si	urface Soil Samples	(continued)	
YA-37	0-2	2.8	Brown, medium to coarse sand with fill debris (brick and glass)
YA-38	0-2	8.6	Brown to black, medium to coarse sand and silt with cinders
YA-39	0-2	14.8	Brown, fine sand with silt and brick
YA-40	0-2	22	Brown, fine sand and silt with packed cinders, ash, and glass
YA-41	0-2	54	Black and brown, medium to coarse sand with glass and nails
YA-42	0-2	7.0	Black and brown, medium to coarse sand and silt with glass
YA-43	0-2	65	Black to brown, fine to coarse sand with fill debris (wood and rubber pieces)
YA-44	0-2	0.0	Brown, fine to medium sand with silt and fill debris (glass, brick, ash, and cinders)
YA-45	0-2	0.1	Brown, fine to medium sand with silt and fill debris (cinders, ash, glass, and plastic)
YA-46	0-2	1.6	Black and gray hard packed gravel (0-1); tan fine sand (1-2)
YA-47	0-2	0.1	Red-brown silt and fine sand (0-1); tan and light brown fine sand (1-2)
YA-48	0-2	15.4	Brown to black, medium to coarse sand with debris (cinders, brick, tile, glass, wood, and plastic)
YA-49	0-2	3.0	Brown, fine to coarse sand with silt and much fill debris (brick, cinders, and concrete)
YA-50	0-2	84	Brown to black, medium to coarse sand with silt and fill debris (glass, cinders, and brick); slight to moderate odor
YA-51	0-2	12.4	Brown to black, medium to coarse sand with silt and gravel; slight to moderate odor
YA-52	0-2	0.0	Brown, fine sand with silt
YA-53	0-2	210	Black, coarse to fine sand with debris (glass and plastic)
YA-54	0-2	300	Black silt and fine sand with cinders, gravel, plastic, wood, and paper; noticable odor
YA-55	0-2	22	Black, sand and silt with cinders, gravel, brick, glass, and wood; slight odor
YA-56	0-2	0.2	Brown ilst (0-0.3); tan, fine sand (0.3-2.0)
YA-57	0-2	0.1	Brown silt (0-0.5); Red-brown silt (0.5-1.5); Gray, fine sand (1.5-2)
YA-58	0-2	26	Brown, fine to medium sand with silt and gravel



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HISTORIC FILL REPORT

BAYONNE BARREL AND DRUM SITE NEWARK, NEW JERSEY

Prepared for:
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1.0 Introduction

This Historic Fill Report has been prepared by Quest Environmental & Engineering Services, Inc. on behalf of *de maximis, inc.* and the Bayonne Barrel Participating Parties Group for the Bayonne Barrel and Drum (BBD) Site located in Newark, New Jersey. This report documents the presence of historic fill at the site. It has been prepared in accordance with the New Jersey Department of Environmental Protection (NJDEP) Technical Requirements for Site Remediation (N.J.A.C. 7:26E).

1.1 Purpose and Objectives

The purpose of this report is to provide the history, types and distribution of historic fill at the BBD site using information provided by prior site investigation reports and review of historic aerial photographs. This report also evaluates the types and concentrations of contaminants that are associated with the historic fill.

1.2 Report Organization

This report is organized into the following sections:

- Section 2: Site Description and History (description of the site and history of known operations and prior environmental site investigations);
- Section 3: Historic Filling (description of the historic filling activities and the types and distribution of fill occurring across the site);
- Section 4: Historic Fill Contaminants (evaluation of the contaminants and concentrations associated with the historic fill); and
- Section 5: References

2.1 Site Description

The Bayonne Barrel and Drum site, located at 150-154 Raymond Boulevard in Newark, Essex County, NJ, occupies approximately 15 acres of Block 5002, Lots 3 and 14 (Figure 1). The property has an elongate shape and is bounded by Raymond Boulevard and an exit ramp from Routes 1 and 9 to the north and west, an entrance to the New Jersey Turnpike to the east and south, and a cinema parking lot to the southwest (Figure 2). The nearest residential area to the BBD site is approximately one-half mile away. Ground surface is approximately 20 feet above mean sea level at southwest corner of the property and gradually slopes to the northeast to approximately 5 feet above mean sea level.

Nine (9) buildings exist at the BBD site and are located in the northern portion of the Site. Building descriptions and estimates of the construction dates are summarized below.

Building Number	Floor Area (sq. ft.)	Estimated Construction Date	Description/Use
1 29,000		1967 - 1968	Concrete block building used for reconditioning of closed head drums, and for shot blasting open and closed head drums
2	2,250	1964 - 1965	Drum staging building for preparation for the furnace
	760	1964 - 1965	Furnace for the cleaning of drums
3 14,000		Prior to or during the early 1930's	Concrete and brick building used to receive open head drums immediately after cleaning in the furnace
4	20,000	Late 1951 - 1952	Transite and steel building used for the reconditioning of open head drums
5	4,000	1967	Paint storage building
6	5,400	Prior to or during the early 1930's	Office building
		Prior to or during the early 1930's	Machine shop and maintenance garage
8	2,400	1940's	Boiler House
9	1,750	1968 - 1969	Service Building

In addition to the buildings, additional structures at the site include: a water separator trench: a 5,000-gallon underground wastewater settling tank: a 60,000-gallon aboveground tank utilized for settling water prior to discharge to the sewer; four (4) underground tanks near Building No. 8; and a collection/separator trench located adjacent to the furnace. Two (2) additional aboveground storage tanks, which were reportedly never put into service, are located in the wastewater settling tank area. Two thirty-foot gas transmission line easements traverse the site from south to north.

2.2 Site History

The BBD site is believed to have been first developed during or prior to the early 1930's with the construction of Building Nos. 3, 6 and 7 (Figure 2). The original date of construction of these buildings and use are not fully known. One of the original uses is reported to have been a leather tannery. By the mid-1930s, the Bayonne Barrel and Drum Company and a predecessor company, Export Barrel Company, began operations as a drum supplier/drum reconditioning facility. Original operations occupied three acres at the northern end of the property and extended approximately 250 feet east of the site, which is currently occupied by the NJ Turnpike. During the mid-1950s, drum operations expanded with additional building construction and drum storage in the 11-acre area south of the current buildings. In 1982, Bayonne Barrel and Drum Company filed for protection from creditors under Chapter 11 of the Bankruptcy code. Operations ended during 1983. Several tenants utilized the property between 1983 and 1990 for a variety of businesses.

During operations, the BBD facility reconditioned and recycled used drums for resale and reuse. No other products are reported to have been manufactured at the site. Materials used in the drum reconditioning operation included detergents, caustic cleaning solutions, solvent based cleaning solutions, solvent based paints, and thinners. Sources of the reconditioned drums reportedly included food and cosmetics, petrochemicals, herbicides and pesticides, military use, and solid and hazardous waste facilities.

During the 1980s and early 1990's, EPA's Resource Conservation and Recovery Act (RCRA) Branch and the New Jersey Department of Environmental Protection (NJDEP) were involved with the Site. EPA site inspections in 1984, 1988 and 1991 confirmed the presence of numerous CERCLA hazardous substances at the Site, including, but not limited to: polychlorinated biphenyls (PCBs), toluene, trichloroethylene, vinyl chloride, chromium, lead, zinc, benzene and xylene.

Because the BBD site contained approximately 46,000 drums, numerous storage tanks, ash piles and hazardous liquids, the EPA conducted an emergency removal action of materials deemed hazardous to human health and the environment. This work was conducted in 1992 and in 1994-1996.

A number of site investigations characterizing site soils have been conducted at the site since 1985 for various purposes. The following is a list of these investigations.

- 1985 Soil and Ground Water Characterization conducted by Dan Raviv Associates, Inc.
- 1986 Preliminary Site Investigation conducted by Louis Berger & Associates for the New Jersey Turnpike Authority in a proposed New Jersey Turnpike Right-of-Way.
- 1997 Soil Investigation conducted by Blasland, Bouck & Lee, Inc.
- 2002 Soil Investigation conducted by Quest Environmental & Engineering Services, Inc.

Information on soil types and contaminant concentrations obtained by these investigations were reviewed for evaluating historic fill. Reports prepared as a result of these investigation are listed in Section 5: References. Copies of boring logs and soil descriptions appearing in these reports are provided in Appendix A. The following is a list of constituents of concern (COCs) for the site based on these prior assessments:

Pesticides

- Metals
- Volatile Organic Compounds
- PCBs
- Polycyclic Aromatic Hydrocarbons
- Dioxins
- · Total Petroleum Hydrocarbons

The NJDEP Technical Requirements for Site Remediation (N.J.A.C 7:26E) defines historic fill as non-indigenous material deposited to raise the topographic elevation of the site, which was contaminated prior to emplacement, and is in no way connected with the operations at the location of emplacement and which includes without limitation, construction debris, dredge spoils, incinerator residue, demolition debris, fly ash, or non-hazardous solid waste. Historic fill does not include material that is substantially chromate or other chemical production waste, waste from processing of metal/mineral ores, residues, slag or tailing, or a municipal solid waste landfill site. The following subsections describe the history, types and distribution of historic fill at the BBD site.

3.1 Fill History

This section presents a chronological narrative of significant physical changes that have impacted the site's environmental setting, based on review of historic aerial photographs and site history prepared from information available in previous reports (see References).

Pre-1940

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The Bayonne Barrel and Drum site originally was wetlands/floodplain associated with the Passaic River, which is approximately 1,800 feet east of the property. An 1889 historic map shown as Figure 3 depicts this area along the Passaic River as the "Newark Meadows". The site was originally developed sometime during or prior to the early 1930's with the construction of the original buildings (Nos. 3, 6 and 7) at the northernmost portion of the site. Fill occurring beneath these oldest buildings is primarily composed of coal ash and cinders. Coal was a primary source of heating fuel during this time. The ash produced from the burning of coal was an abundant source of fill, particularly in urban areas. Drum operations are believed to have begun during or just prior to 1934 based on a 1934 aerial photograph (not shown) indicating the presence of drums (Diversified Environmental, 1992).

1940

Figure 4 is an aerial photograph that was taken on April 6, 1940, which was circa the time when the Bayonne Steel Drum Company merged with Export Barrel Company to

form the Bayonne Barrel and Drum Company. The photograph shows the site buildings and operations located in the northern-most portion of the property. Site operations include one building extending approximately 250 feet east of the current property boundary. A large disturbed area is evident in the central and southern portions of the current property boundary and extends further to south and southeast. This disturbed area is a landfill operation known as the 15E Landfill, which was operated by the City of Newark during the 1930's to 1950's. The landfill commenced operation south of the BBD site at Foundry Street sometime during or prior to the early 1930's and progressed north onto the BBD site by 1940. Soil borings completed on site within the limits of the landfill describe the fill material as containing sand and ash/cinders with construction debris including glass, brick, metal, cement, and wood (Raviv, 1986; Berger 1986; and BBL 1997). Test pits that were excavated in the landfill at the adjacent property to the south describe the landfill material as "ash material (plus bottles and metal) from municipal and/or private incineration of household waste. Other common fill included a black tar-like residue, bricks, glass, metal, asphalt, wire and cable, and other construction Therefore, based on these descriptions, the and demolition debris" (Wehran, 1988). landfill material is composed of sand, incinerator residue/ash, and construction/demolition debris, which meets the definition of historic fill.

An undisturbed/undeveloped area occurs east of the landfill and southeast of the drum operations area. Manmade drainage channels dissect this area. The channels drain toward the east to Harrison Ditch.

1947

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Figure 5 is an aerial photograph that was taken on April 28, 1947. The photograph shows BBD operations still limited to the northern portion of the site. A substantially greater amount of drum storage is evident compared to the 1940 aerial photograph. The eastern most building was razed and a new building was constructed at the northeast corner of the building complex. In addition, a surface impoundment with dimensions of approximately 140 feet by 160 feet existed immediately south of the drum storage area. The surface impoundment was reported to have received liquid wastes from the drum reconditioning operations. A portion of this former impoundment straddles the current eastern site boundary. The landfill had expanded further onto the BBD site, covering the southern two-thirds of the current site boundary. The small area south of the impoundment and north of the landfill still appeared to be largely unfilled at this time.

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Figure 6 and 7 are low-angle aerial photographs that were taken sometime during 1950. Figure 6 presents a view toward the south, and Figure 7 presents a view of the northern portion of the site toward the west. The photographs show landfill operations continuing in the southern portion of the property and the unfilled grassy area remaining just south of the surface impoundment. The area west of the surface impoundment has been graded for additional drum storage. Approximately 20 drums were placed in this graded area at the time of the photograph. The initial construction of the NJ Turnpike is observed in the lower left foreground of Figure 6. The eastern most drum storage area shown in the 1947 aerial photograph was condemned and occupied by the NJ Turnpike.

During the early 1950's, BBD expanded operations to the south by leasing a 5.5-acre property known as the Langella property and acquiring a 4-acre property from the Episcopal Diocese of Newark property. The Langella property was located in the western portion of the southern two-thirds of the current site and was part of the 15E Landfill. The Episcopal Diocese property was located in the southeastern portion of the current site and was partially covered by the 15E Landfill at its western end with the eastern portion remaining as wetlands.

1953

Figure 8 presents an aerial photograph taken on December 5, 1953. The photograph shows drum storage in the graded areas west of the surface impoundment and in areas to south. The 20,000 square-foot Building No. 4 (open head drum reconditioning) is constructed at this time. The surface impoundment still existed and drainage channels are observed to the south and east. Landfill operations appeared to have ceased at the site, but continued at the adjacent property to the south. The southern portion of the site was not entirely graded, and the grassy wetland area remained south of the lagoon. The NJ Turnpike construction was completed by this time.

During the early 1950's it was reported that BBD had contracted with McCaffery Contracting Co. of Newark to fill the Episcopal Diocese property with bottom ash from the Public Service Electric & Gas generating station that was located north of the site (Diversified Environmental, 1992). Filling activities in this portion of the site are evident in this 1953 photograph, where the wetland area is located at southeast portion of the property just north of the NJ turnpike loop.

1959

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The 1959 aerial photograph (Figure 9) shows that drum storage expanded fully within the southern and central portions of the property. The surface impoundment was filled by this time, which is indicated by the light discolored area. The wetland area south of the surface impoundment also appeared to be largely filled at this time. A drainage channel existed along the eastern boundary of the property adjacent to the NJ Turnpike, which appeared to drain to a trench located east of the former surface impoundment. A small new building was constructed adjacent to the southeast corner of Building No. 4.

1969

Figures 10 and 11 present low-angle photographs taken on June 4, 1969. Figure 10 is a view toward the east and Figure 11 is a view toward the north. The major change to the site evident in the photograph was the western expansion of the NJ Turnpike onto the BBD site, which resulted in the loss of approximately 200 feet of the northeastern portion of the site, including removal of the eastern most buildings shown in Figure 9. Rows of drum storage continued in the central and southern portions of the site. Building Nos. 1, 2 and 5 were constructed by this time. A conveyor extended approximately 250 feet south of Building No. 2/Furnace with drums clustered around the conveyor. In addition, aboveground storage tanks were constructed east of Building No. 1. Other than the Turnpike construction, no significant filling activities are evident in these photographs.

1973 and 1982

The 1973 and 1982 photographs (Figures 12 and 13) show similar uses of the property as in the 1969 aerial photographs. No further filling is evident in these photographs. An ash pile occurs at the western most drum row from the south.

3.2 Historic Fill Types and Distribution

Historic aerial photographs and prior soil sampling indicate that the entire property has been filled with non-indigenous material at times during or prior to the early 1930's through the 1950's. The site can be divided into three general areas of filling that occurred at different times. These areas are shown in Figure 14 and include: (1) filling associated with the initial development of the site that occurred during or prior to the early 1930's, (2) filling associated with the 15E Landfill that occurred during the 1940's to the early 1950's, and (3) filling associated with the former surface impoundment and remaining wetland area that was part of the Episcopal Diocese of Newark property during

the mid-1950's. The following is a description of the fill in each of these areas and the native soil underlying the fill.

Native Soil

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Figure 15 provides cross-sections of the site showing the thickness and subsurface distribution of the fill and the depth to native soil. Native soil consists of an organic clay/meadow mat associated with the wetlands/flood plain in this area. It is described in boring logs and soil descriptions appearing in Appendix A as a gray sandy clay (YA-1), brown clay (YA-3) or brown-gray-black clay with organic material/meadow mat (BLDG borings). The thickness of this organic clay/meadow mat is approximately 2 - 3 feet. Underlying the organic clay/meadow mat is a red-brown, fine to medium grained sand of glacial origin. The elevation of the native soil is approximately 2 to 4 feet above mean sea level. Therefore, soil above this elevation consists entirely of fill material.

Initial Site Development Fill

The fill material within the northern portion of the site in the vicinity of the buildings consists primarily of coal ash and cinders with occasional fragments of brick, glass or slag (see logs for BLDG borings). The fill was emplaced to raise the ground surface for the initial building construction and industrial use of the property. This material is approximately 4 to 5 feet thick in this area.

15E Landfill

The fill that covers a majority of the southern and central portions of the site is associated with the 15E Landfill. The northernmost extent of this fill underlies a portion of the buildings. The fill material consists primarily of sand, ash/cinders and demolition debris including glass, brick, metal, cement, and wood. There are no organic wastes typical of a municipal solid waste landfill. The fill varies in thickness from approximately fifteen feet at the southwest corner of the site (YA-1) to eight or ten feet in the central portion of the site (YA-5) and six feet at the southeastern end of the landfill area (YA-4). Its thickness generally mirrors the change in topographic elevation. The upper four to ten feet of this fill layer appears to contain a greater amount of ash and demolition debris than the lower 2 to 6 feet overlying the native soil. The BBL soil descriptions generally refer to the fill as having black staining, which appears be related to the presence of coal ash and cinders. The 1986 Raviv report refers to this fill as a black coal-ash type cinder fill. The same material also occurs at the multiplex theater property to the south.

Central Eastern Boundary

This area includes the former surface impoundment and the area immediately to the south that was part of the Episcopal Diocese property purchased during the mid-1950's. This area was filled from approximately 1953 to 1958. The 1953 aerial photograph shows the surface impoundment remaining and initial filling of the last original wetland area. By 1959, the entire area is nearly filled. The fill in the vicinity of the former surface impoundment consists largely of brown to black sand (STA-2, STA-3, and YA-51). The fill in the area to the south is described as brown to black silt and sand with cinders and debris (e.g. glass, brick, wood, etc.), which is similar to the landfill material (YA-3, YA-50, YA-54, M1190/1191). Filling in this area was reported to have consisted largely of bottom ash from coal incineration, although landfill material (demolition debris) occurs in portions of this area. The thickness of the fill in this area is estimated to be approximately four to six feet.

In summary, the historic fill present on site predominantly consists of sand and coal cinder/ash material with various amounts of construction and demolition debris. The historic fill does not include material which is substantially chromate chemical production waste or other chemical production waste or waste from processing of metal or mineral ores, residues slag or tailings. In addition, there is no evidence that the fill material constitutes a municipal solid waste.

4.0 Historic Fill Contaminants

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Types and relative concentrations of historic fill contaminants were evaluated using prior soil sample data and also by comparison to soil sample data obtained from the adjacent multiplex theater site, which is also a part of the 15E Landfill. This property was originally developed as a drive-in theater during the mid-1950's. The thickness of the landfill material at the theater site varies from five to eleven feet (Wehran, 1988). Appendix B provides copies of the sample data summary tables and sample location maps from two site investigations conducted at the theater property (1988 Wehran Report; 1990 Berger Report).

Approximately 140 locations were sampled across the Bayonne Barrel and Drum (BBD) site. A majority of the samples collected at these locations were obtained from surface soil (0-2 feet). Vertical profile samples were collected for various analytical parameters at less than 15 locations within the fill. Appendix C contains copies of data summary figures. The figures indicate that there is a variety of contaminants in soil that exceed NJDEP Non-Residential Direct Contact Soil Cleanup Criteria and some of the contaminants are widespread across the site such as metals, PAHs, PCBs, and Dioxin.

Initial Site Development Fill

Contaminant concentrations associated with the ash fill in this area were evaluated using samples collected from beneath Building Nos. 3. 4 (northern section), 5, 6, 7 and 8, which were least likely to have been impacted by historic site operations or the presence of the 15E Landfill material. In this evaluation, the median concentration and maximum concentration are presented to assess potential contributions from historic fill. The sample median is used rather than the arithmetic mean in order to minimize the effect of one or two elevated sample concentrations that can significantly skew the mean concentration, given the comparatively small sample population in this area. Concentrations of metals and polycyclic aromatic hydrocarbons are also compared to the NJDEP Historic Fill Data (Appendix D of the NJDEP Technical Requirements of Site Remediation).

Only those contaminants that were commonly detected at concentrations exceeding NJ Non-Residential Direct Contact Soil Cleanup Criteria (NRDCSCC) in the northern portion of the site were evaluated. For the PAHs, benzo(a)pyrene and benzo(a)anthracene were selected to be representative of the carcinogenic PAHs detected in the fill. VOCs were not considered due to the small probability of being associated with a coal ash fill. The following table summarizes the results.

Parameter	Sample Population	Median	Maximum	NJ Historic Fill Average	NJ Historic Fill Maximum	NJ NRDCSCC
Metals (mg/kg):	1 1					
Arsenic	9	4.6	96.5	13.2	1,096	20
Copper	9	137	1,670	na	na	600
Lead	9	623	2,860	574	10,700	600
Zinc	9	445	2,250	575	10,900	1,500
PAHs (mg/kg)						
benzo(a)pyrene	9	1.9	14	1.89	120	0.66
benzo(a)anthracene	9	1.5	15	1.37	160	-4
PCBs (mg/kg)	9	0.21	3.7	na	na	2
TPH (mg/kg)	9	217	1,150	na	na	10,000
Pesticides 4,4' DDE	9	0.018	0.16	na	na	9
Dioxin (ug/kg equiv)	3 ^a	0.17	0.26	na	na	na

Dioxin sample concentrations as total toxic equivalent 2,3,7,8-TCDD are 0.04, 0,17, and 0.26 ppb

Metals, such as arsenic, lead, copper and zinc, and carcinogenic PAHs are typical components of a coal ash type fill. The median and maximum concentrations of these constituents in the coal ash fill are within the average and maximum concentrations reported in the NJDEP Historic Fill Database. Therefore, it is believed that the metals and PAHs in this area are due primarily to the fill, rather than historic operations. Low levels of TPH, Dioxin and PCBs within the range of the median and maximum concentrations may also be associated with the fill, although contributions from site operations cannot be ruled out. PCBs were manufactured beginning in the 1920s and therefore existed during the probable time of initial filling of this area (circa early 1930s). The presence of dioxins in ash material is possible from incomplete combustion of organic materials.

15E Landfill/Central Eastern Boundary

Contaminant concentrations for the 15E Landfill material were also evaluated as above and compared to the concentrations detected at the multiplex theater property located south of the BBD site, where the 15E Landfill also occurs. The fill at the Central Eastern Boundary area is also included with the 15E Landfill because this fill is very similar to the descriptions of the landfill material, which contains a significant portion of coal ash in addition to demolition debris. The 90th percentile concentrations were also calculated to present the level in which most samples fall, given that the sample population is larger for this area (>25 samples). The 90th percentile concentration represents the concentration within which 90 percent of the sample concentrations occur. The following table summarizes the results.

Parameter	BBD SP	BBD Median	90th Pnctile	BBD Max.	Historic Fill Avg	Historic Fill Max.	Th. SP	Theater Median	Theater Max.	NJ NRDCSCC
Metals (mg/kg):							-			
Arsenic	32	20	92,5	390	13.2	1,096	17	25	1,200	20
Copper	30	233	1,850	15,500	na	na	17	261	2,560	600
Lead	84	1,650	8,300	198,000	574	10,700	17	1,340	15,400	600
Zinc	30	758	6,005	12,200	575	10,900	17	733	2,830	1,500
PAHs (mg/kg)	1 1									-
benzo(a)pyrene	64	2.2	12	18	1.89	120	17	10	530	0.66
benzo(a)anthrac.	64	1.7	16	22	1.37	160	17	9.3	760	4
PCBs (mg/kg)	109	9.8	83.1	3,520	na	na	17	< DL ^a	23	2
TPH (mg/kg)	45	1,390	12,460	173,000	na	па	17	608	2,970	10,000
Pesticides										
4,4' DDE	15	0.003	na	0.95	na	na	17	0.091	3.5	9
4,4' DDD	15	0.007	na	0.84	na	na	17	0.24	68	12
4,4' DDT	15	<dl<sup>b</dl<sup>	na	0.86	na	na	17	<dl<sup>c</dl<sup>	9.2	9
Dioxin (ug/kg)	66	2.74	61	542	na	na	na	na	na	na

SP = Sample Population

Median and maximum concentrations of metals detected in the landfill material generally are higher than the values reported in the Historic Fill database. The 90th percentile levels, however, fall within the maximum Historic Fill values, suggesting that most of the landfill material conforms to the Historic Fill database. Median metal concentrations are similar to those detected at the multiplex theater site, indicating that the landfill material contributes similar concentrations to each site. Maximum values for

a 14 of 17 PCB samples were reported at less than detection limits (DL)

b 13 of 15 4,4' DDT samples were less than detection limits (DL)

c 9 of 17 4,4' DDT samples were less than detection limits (DL)

copper, lead, and zinc are substantially higher than detected at the multiplex theater site, which may be in part due to the larger sample population at the BBD site that increases the probability of detecting elevated "hot spot" locations. Contributions from site operations, however, cannot be entirely ruled out by this comparison.

The median, maximum and 90th percentile PAH concentrations are similar to the Historic Fill database values, but are substantially less than the multiplex theater site values. Pesticide concentrations at the BBD site are also generally less than the multiplex theater site. The presence of pesticides in the landfill material at the adjacent theater property suggests that the landfill material also contributes pesticides to the BBD site.

Concentrations of PCBs detected in the landfill material at the BBD site are substantially higher than detected at the multiplex theater site. Fourteen of the 17 samples collected at the theater site did not detect the presence of PCBs, while most of the samples collected at the BBD site detected PCBs. Based on this result, the landfill material does not appear to be a primary source of PCBs detected in the central and southern portions of the BBD site. Therefore, historic operations may be largely responsible for the PCBs.

Median and maximum levels of total petroleum hydrocarbons detected at the BBD site are greater than at the multiplex theater site, which also may be in part due to the larger sample population at the BBD site. However, historic site operations may have contributed to TPH levels, as with PCBs.

The median concentration of dioxin detected in the area of the landfill material is 2.7 ppb with 90% of the sample concentrations within 61 ppb. Levels detected in this area are generally substantially higher than detected in the coal ash fill underlying the building area. Dioxin was not analyzed in the theater property samples.

Examining the vertical distribution of contaminant concentrations within the fill can provide further assessment of historic fill contributions versus site operations. Typically, historic fill will not exhibit a consistent vertical concentration gradient because contaminant concentrations generally are randomly distributed within the fill. Vertical distributions resulting from surface discharges, however, typically do exhibit a decreasing vertical gradient from the surface, particularly for contaminants that are not highly mobile (e.g. metals, PCBs, dioxins). The following table presents five sample locations

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5.0 REFERENCES

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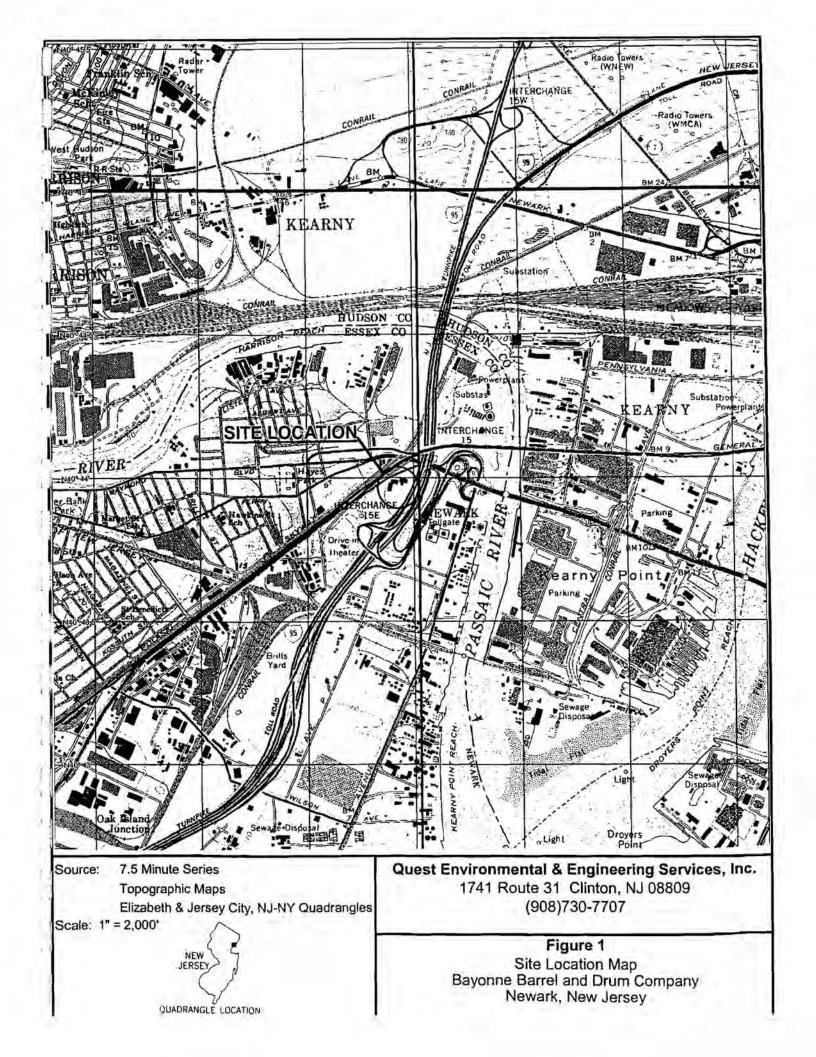
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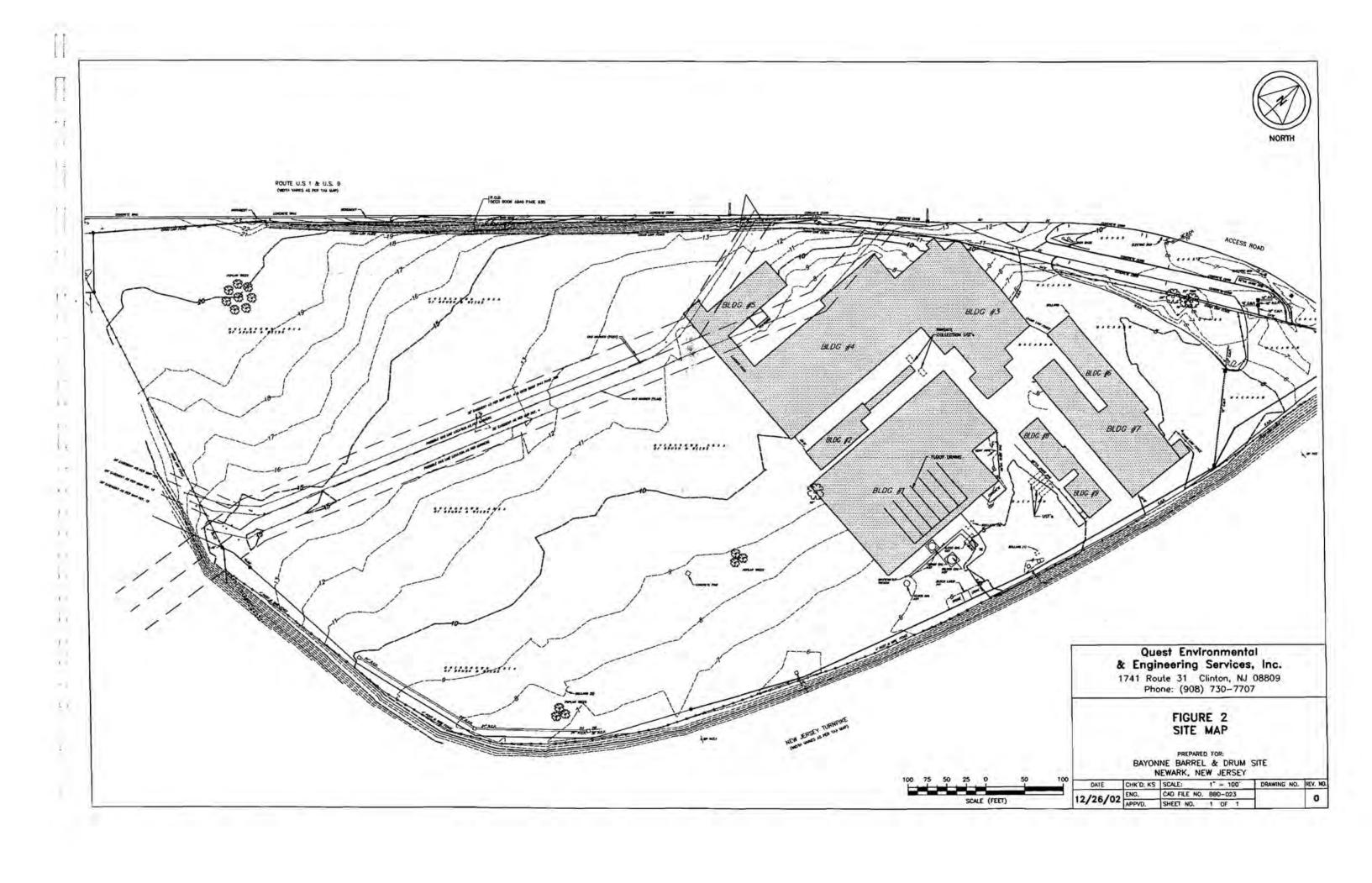
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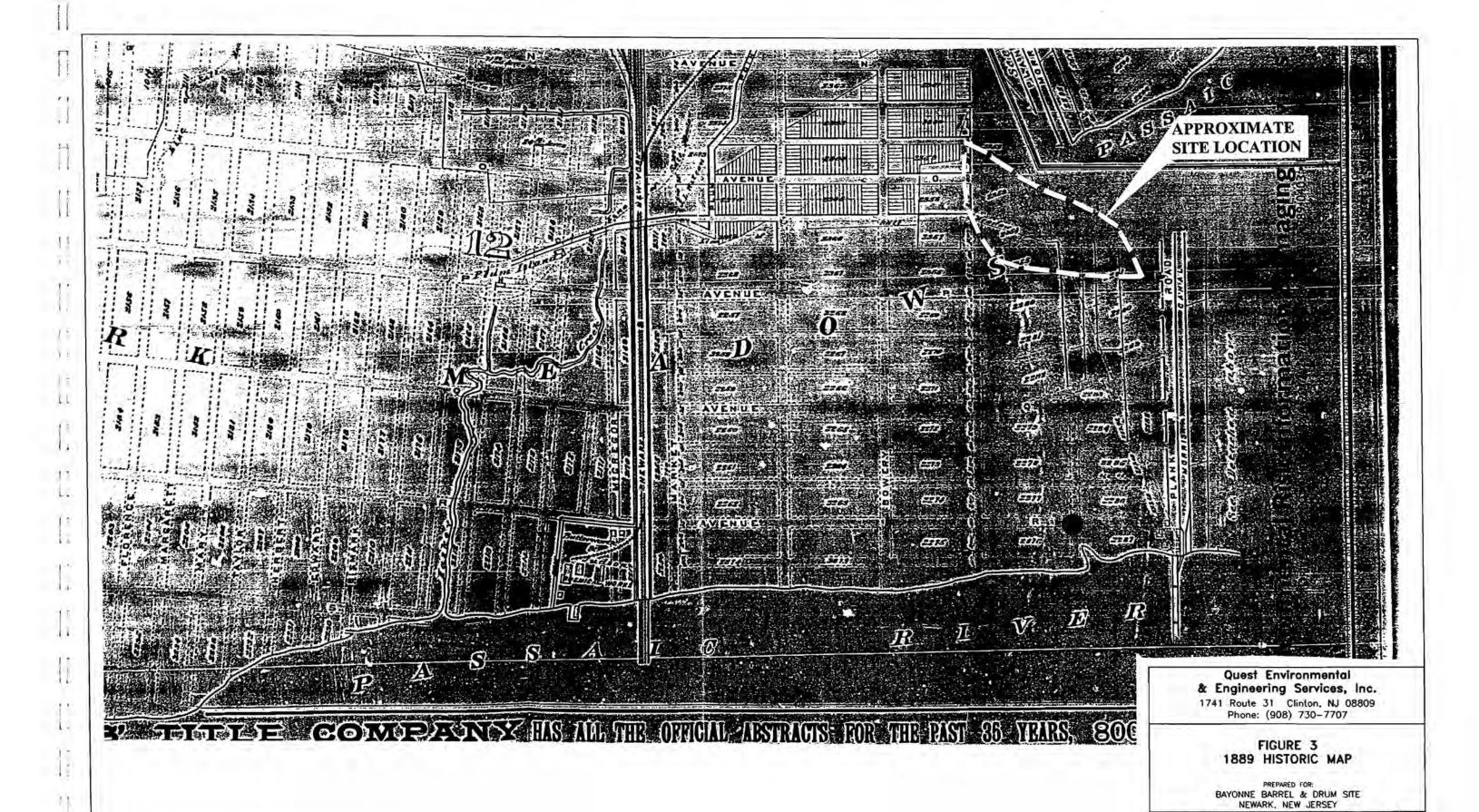
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- Louis Berger and Associates, Inc., December 1986. Results of Preliminary Investigations and Sampling in Proposed New Jersey Turnpike Right-of-Way at the Bayonne Barrel and Drum Property, Newark, New Jersey.
- Louis Berger and Associates, Inc., September 1986. Preliminary Site Investigations New Jersey Turnpike at the Former Newark Drive-In Property, Newark, New Jersey.
- Dan Raviv Associates, Inc., April 18, 1986, updated July 1986. Soils and Ground Water Characterization Bayonne Barrel and Drum Company, Newark, New Jersey, Job No. 84C182.
- Wehran Engineering Corporation, October 1988. Summary Report of the Test Pit and Monitoring Well Investigation at the Newark Drive-In Site.
- Diversified Environmental Resources, Inc., and Environmental Risk Limited, Volume
 I, February 1992. RCRA Closure Plan and CERCLA Removal for Bayonne Barrel
 and Drum Company, Newark, New Jersey.
- Blasland, Bouck & Lee, Inc., March 1997. Bayonne Barrel and Drum Site Soil Investigation Report.
- Quest Environmental & Engineering Services, Inc., August 29, 2002. Soil Investigation Report Addendum – Bayonne Barrel and Drum Site.







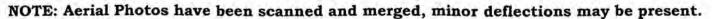
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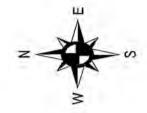
12/17/02

CAD FILE NO. BBD-019 SHEET NO. 1 OF 1 DRAWING NO. REV. NO.

11







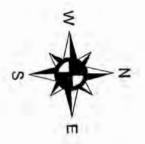
Approximate location of current site boundaries

FIGURE 4
Bayonne Barrel & Drum
Newark, New Jersey

Newark, New Jersey
Scale: 1 in = ~140 ft Date: 4-6-40



NOTE: Aerial Photos have been scanned and merged, minor deflections may be present.



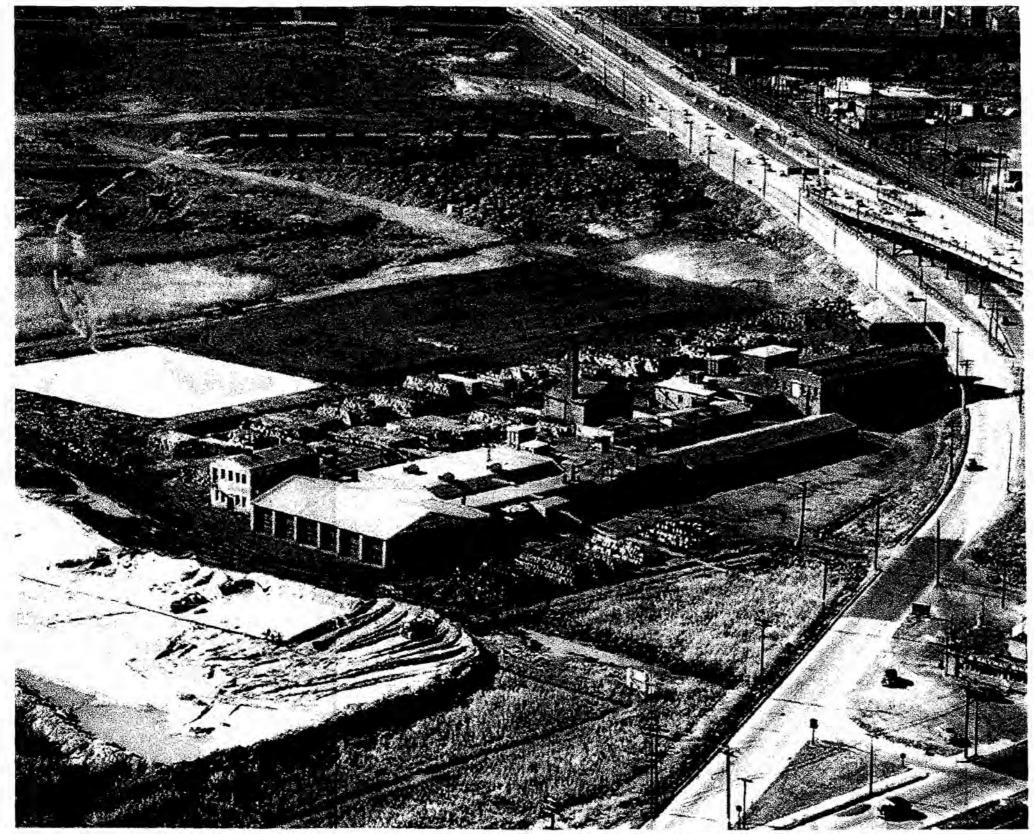
Approximate location of current site boundaries

FIGURE 5

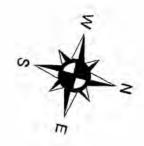
Bayonne Barrel & Drum

Newark, New Jersey

Scale: 1 in = ~ 175 ft Date: 4-28-47



NOTE: Aerial Photos have been scanned and merged, minor deflections may be present.



Approximate location of current site boundaries

FIGURE 6
Bayonne Barrel & Drum
Newark, New Jersey
Scale: NA Date: est. 1950



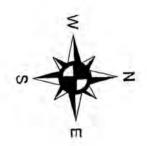


FIGURE 7
Bayonne Barrel & Drum
Newark, New Jersey

Scale: NA Date: est. 1950

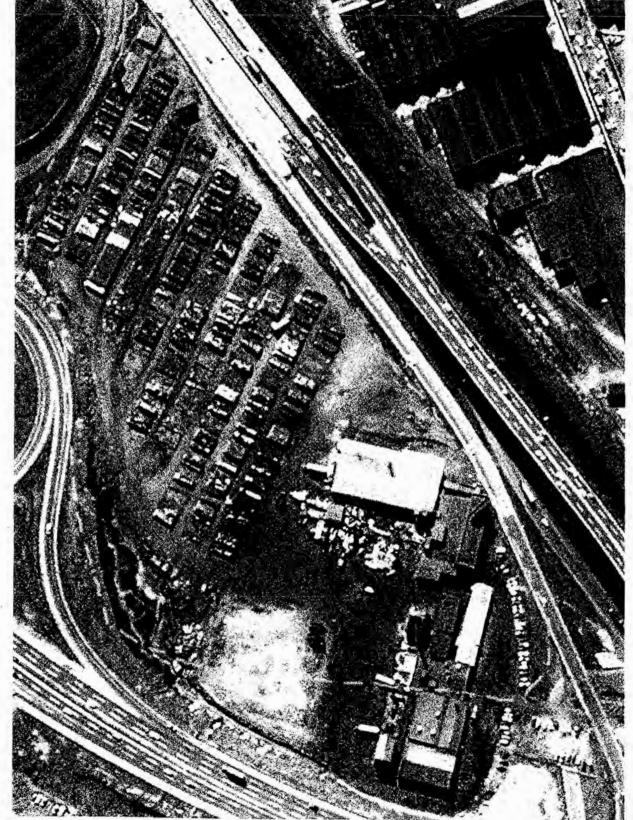
NOTE: Aerial Photos have been scanned and merged, minor deflections may be present.





NOTE: Aerial Photos have been scanned and merged, minor deflections may be present.

FIGURE 8 Bayonne Barrel & Drum Newark, New Jersey Scale: 1 in = ~200 ft Date: 12-5-53



NOTE: Aerial Photos have been scanned and merged, minor deflections may be present.



Approximate location of current site boundary.

FIGURE 9

Bayonne Barrel & Drum

Newark, New Jersey

Scale: 1 in = ~175 ft Date: 4-15-59



NOTE: Aerial Photos have been scanned and merged, minor deflections may be present.

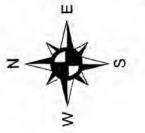


FIGURE 10
Bayonne Barrel & Drum
Newark, New Jersey
Scale: NA Date: 6-4-69



NOTE: Aerial Photos have been scanned and merged, minor deflections may be present.

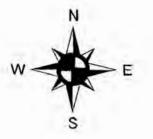
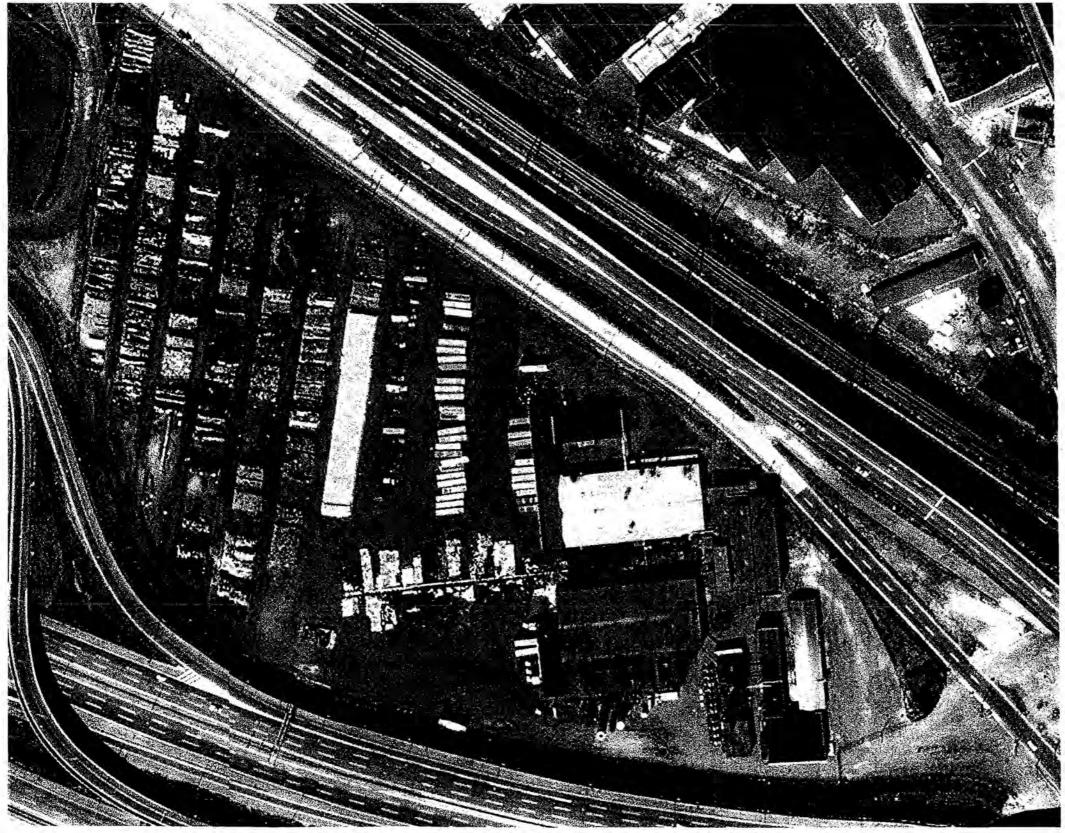
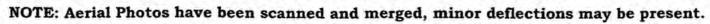


FIGURE 11 Bayonne Barrel & Drum Newark, New Jersey Scale: NA Date: 6-4-69





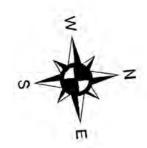


FIGURE 12

Bayonne Barrel & Drum

Newark, New Jersey

Scale: 1 in = ~130 ft Date: 4-15-73

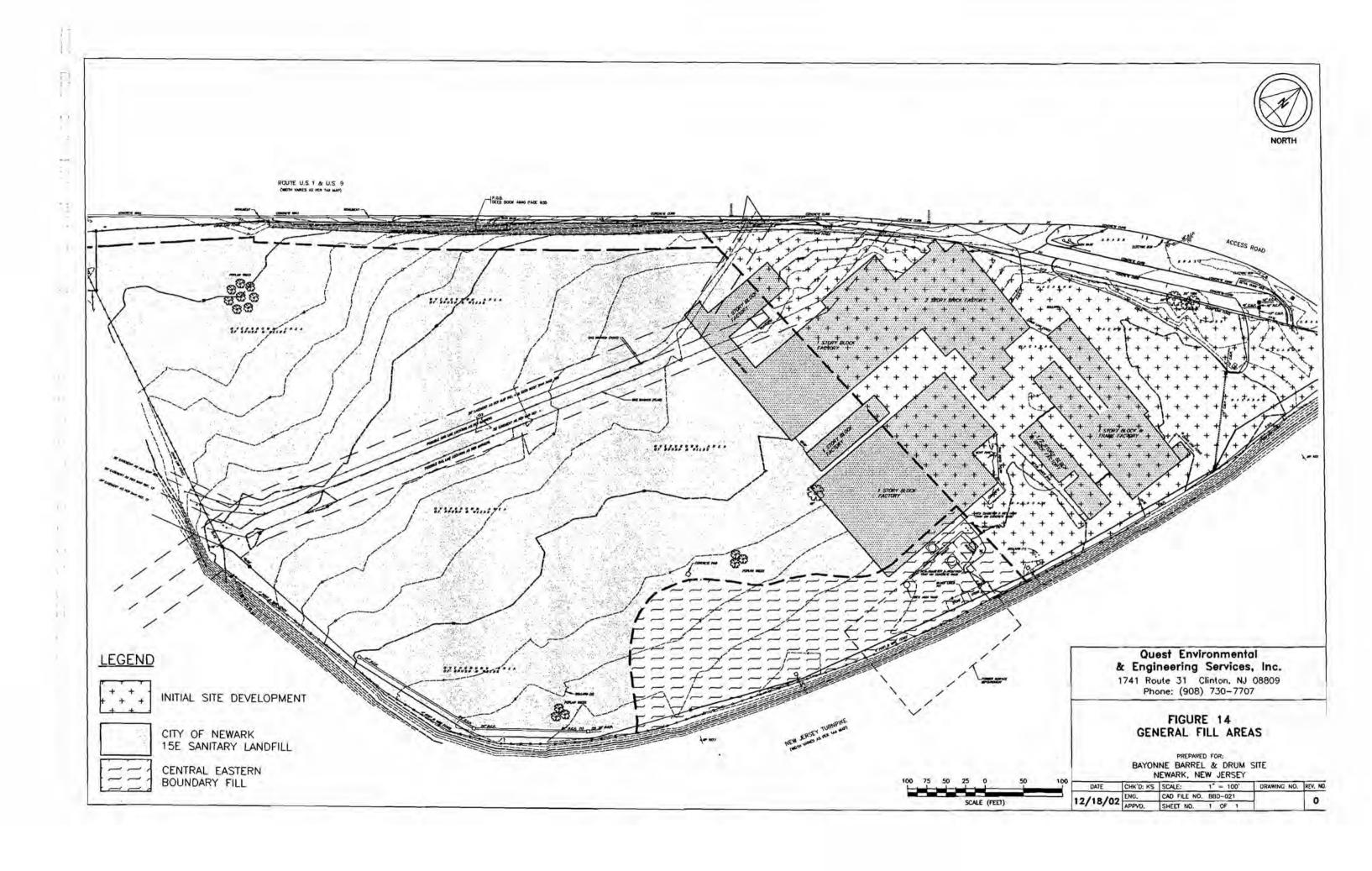


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NOTE: Aerial Photos have been scanned and merged, minor deflections may be present.



FIGURE 13 Bayonne Barrel & Drum Newark, New Jersey Scale: 1 in = ~155 ft Date: 10-23-82



Appendix B

Data Summary Tables/Figures – Multiplex Theater Property

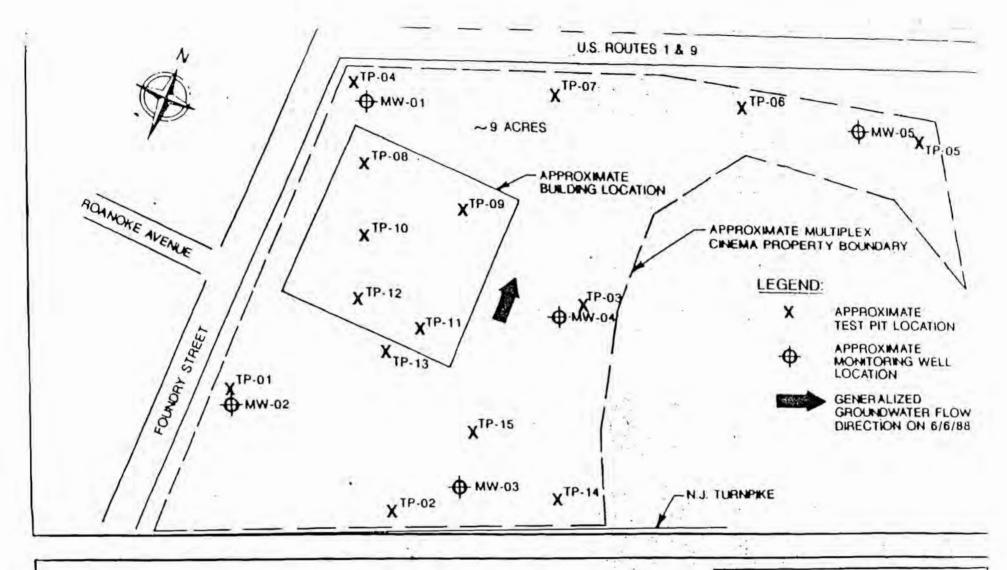


FIGURE 3

APPROXIMATE TEST PIT LOCATIONS

NATIONAL AMUSEMENTS, INC.

Table 5

NATIONAL AMUSEMENTS, INC.

VOLATILE ORGANIC COMPOUNDS DETECTED IN TEST PIT SAMPLES

Parameter (μg/kg)	Test Pit Samples .										
	TP-01-DIS	TP-02-DIS	TP-02-DIS-RE	TP-02	TP-03	TP-04	TP-05-DIS	TP-07			
Carbon Disulfide		- 7									
Ethyl Benzene				12			171				
Xylene (Total)				31			50	, 61			
Benzene		. 8	27	2)			26 J	u			
Toluene	2 JB	8 B		3 18	1,77	- Y.E	24 J	. 6 JB			
Chlorobenzene			E-216	3.1				8			

Notes:

Blank = Compound not detected

Estimated value, result below detection limit

B = Compound also found in blank

Table 5

NATIONAL AMUSEMENTS, INC.

VOLATILE ORGANIC COMPOUNDS DETECTED IN TEST PIT SAMPLES

Parameter (µg/kg)	Test Pit Samples										
	TP-07-RE	TP-08	TP-08-RE	TP-09	TP-12	TP-13	TP-14-DIS				
Carbon Disulfide				7	F. 7-						
Ethyl Benzene		520	370 7	. 14	130		110,000				
Xylene (Total)		1,000	760	.27	210		220,000 B				
Benzene	81	89	52	3 1	- 28 J		16,000				
Toluene	71	160 B	110	5.JB	35 B		67,000 B				
Chlorobenzene	51	7		**							

Notes:

Blank = Compound not detected

J = Estimated value, result below detection limit

B = Compound also found in blank

Table 6 NATIONAL AMUSEMENTS, INC. BASE/NEUTRAL AND ACID EXTRACTABLE COMPOUNDS DETECTED IN TEST PIT SAMPLES

Parameter			Test Pit S	amples	(/)	
(µg/kg)	TP-01-DIS	TP-02-DIS	TP-02	TP-03	TP-04	TP-05-DIS
Naphthalene	681 .		490	561		5,800,000
2-Methylnaphthalene			2101	63 J		5,000,000
Acenaphthylene	1101		1901	657	17.	1,300,000
Acenaphthene	2201		2103		W	380,0001
Dibenzofuran	981		79 1			160,000 J
Fluorene	250 J		450	641		2,100,000
Phenanthrene	3,200		1,400	560	2,300 J	3,400,000
Anthracene	950		3401	130 J		780,000
Fluoranthene	5,800		1,200	850	2,600 J	1,200,000
Pyrene	5,700		1,400	700	2,600 J	2,100,000
Benzo (b) fluoranthene	1,500		490	1,200		210,000 J
Benzo (k) fluoranthene	3,700		540	1,300		490,000
Benzo (a) pyrene	2,500		690	1,300		530,000
Benzo (a) anthracene	4,200	4 2 2	750	580		730,000
Chrysene	4,400		940	660		940,000
Indeno (1,2,3-cd) pyrene	2,700		450	1,700		480,000
Dibenzo (a,h) anthracene				4.5		130,000
Benzo (g, h, i,) perylene	- 840		510	2,000		130,000
Di-n-Butylphthalate	The second		10,5			-1
bis (2-Ethylhexyl) phthalate	38 J		110 J	77		
2-Chloronaphthalene				12.		
Benzoic Acid	250 J	2,700	1000			
Isophorone		2,700		1.	***	

Notes:

Compound not detected
Estimated value, result below detection limit

Table 6
NATIONAL AMUSEMENTS, INC.
BASE/NEUTRAL AND ACID EXTRACTABLE COMPOUNDS DETECTED IN TEST PIT SAMPLES

* Parameter			Test Pit S	amples		
(µg/kg)	TP-07	TP-08	TP-09	TP-12	TP-13	TP-14-DIS
Naphthalene	3101	29,000	2,500		3301	5,600,000
2-Methylnaphthalene	2101	17,000 J	2,100		2101	3,900,000
Acenaphthylene	1,800	7,300 J	1,300	17,000 J	720	1,300,000
Acenaphthene	650	4,7001	960	5,000 J	640	880,000
Dibenzofuran	500	12/20	360 J		430	130,000 J
Fluorene	970	15,000 J	2,200	22,000)	1,200	1,500,000
Phenanthrene	6,200	42,000	5,600	66,000	5,200	3,100,000
Anthracene	2,600	9,400 J	2,000	19,000 J	1,900	720,000
Fluoranthene	6,700	21,000 J	3,900	45,000	4,900	1,400,000
Pyrene	9,800	30,000	7,400	77,000	6,800	1,900,000
Benzo (b) fluoranthene	5,800	6,900 1	2,900	9,700 J	2,700	210,000 J
Benzo (k) fluoranthene	8,000	7,600 J	3,900	17,000 J	941	490,000
Benzo (a) pyrene	6,500	10,000 1	4,400	25,000 /	3,900	510,000
Benzo (a) anthracene	7,900	13,000 J	4,800	29,000 J	4,300	580,000
Chrysene	7,200	16,000 J	5,500	36,000	4,700	760,000
Indeno (1,2,3-cd) pyrene	2,800		1,900	14,000 J	1,100	470,000
Dibenzo (a,h) anthracene				77		101722
Benzo (g, h, i,) perylene	790		320 J		360)	130,000 J
Di-n-Butylphthalate		2,300 1	110 J	1 5 = 6		
bis (2-Ethylhexyl) phthalate		4,200 J	700	1,600 J	550	
2-Chloronaphthalene			2101		8	N 1 1
Benzoic Acid						1.
Isophorone	Till		1			

Notes:

Blank = Compound not detected

= Estimated value, result below detection limit

Table 7
NATIONAL AMUSEMENTS, INC.
PESTICIDES AND PCBs DETECTED IN TEST PIT SAMPLES

•		Test Pit Samples											
Parameter (µg/kg)	TP-01- DIS	TP-02- DIS	TP-02	TP-03	TP-04	TP-05- DIS	TP-07	TP-08	TP-09	TP-12	TP-13	TP-14 DIS	
4,4' DDE			200		3,500	91		320	200	380	140 J		
4,4' DDD	48	11.1	380	240	68,000	550		2,500	600	1,200	570		
4,4' DDT		25	210		9,200			920	220 J	590	410		
delta BHC	28						55				1		
Endosulfan I				65			250	1.0					
PCB-1260						1,600		10.00					

Notes:

Blank = Compound not detected

= Estimated value, result below detection limit

Table 8 NATIONAL AMUSEMENTS, INC. METALS, CYANIDES, AND PETROLEUM HYDROCARBONS IN TEST PIT SAMPLES

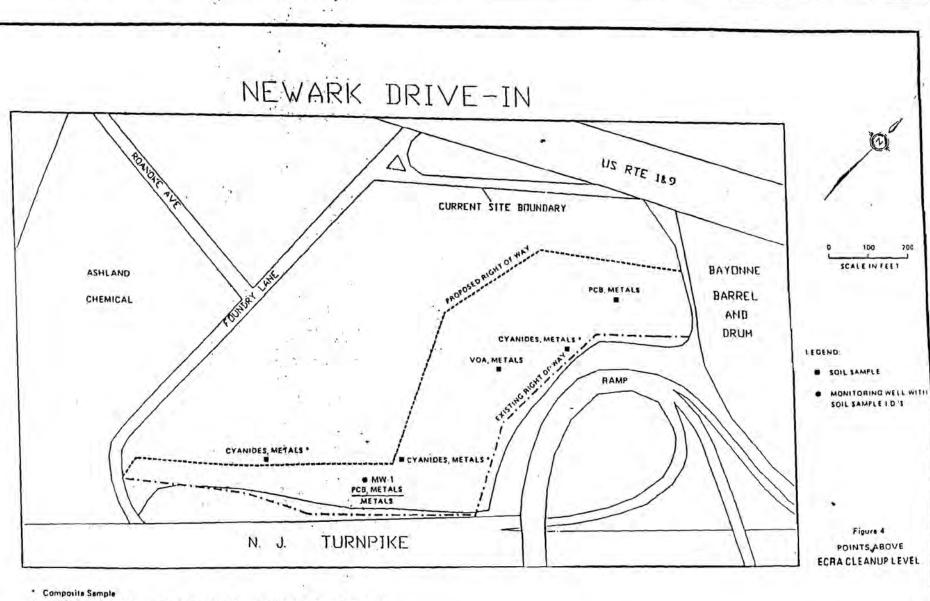
Parameter	\		Test Pit	Samples		
(mg/kg)	TP-01-DIS	TP-02-DIS	TP-02	TP-03	TP-04	TP-05-DIS
Aluminum	5,610	7,870	9,020	5,430	5,B40	6,190
Antimony	<12	13.8	<12	<12	. <12	46.7
Arsenic	14.2	9.1	7.8	10.4	198	19.3
Barium	237	381	245	196	326	1,450
Beryllium	< 1.0	<1.0	<1.0	<1.0	< 1.0	<1.0
Cadmium	<2.0 .	2.74	2.35	< 2.0	4.2	26.6
Calcium	5,400	5,210	5,760	3,720	6,000	13,200
Chromium	19.5	53.3	30.0	20.5	17.8	1,420
Cobalt	< 10	< 10	<10	< 10	<10	<10
Copper	106	127	99	207	91.7	788
Iron	14,200	15,600	16,600	25,600	18,400	38,600
Lead	438	556	274	875	745	15,400
Magnesium	1,920	1,570	2,370	1,360	2,100	2,270
Manganese	371	230	273	300	. 332	322
Mercury	0.95	2.40	1.67	2.59	0.83	2:28
Nickel	14.0	27.7	25.4	24.3	16.4	97.9
Potassium	- 709	718	739	572	622	706
Selenium	<1.0	1.0	1.2	<1.0	<1.0	8.7
Silver	<2.0	<2.0	<2.0	<2.0	< 2.0	2.6
Sodium	233	516	391	434	317	467
Thallium	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	22.1	17.3	18.7	18.0	21.5	31.9
Zinc	395	462	410	564	467	1,940
Total Cyanides	0.69	14.2	11.1	1.78	0.89	22.6
Petroleum Hydrocarbons	480	33.4	204	190	608	673

Table 8

NATIONAL AMUSEMENTS, INC.

METALS, CYANIDES, AND PETROLEUM HYDROCARBONS IN TEST PIT SAMPLES

Parameter			Test Pit S	amples		
(mg/kg)	TP-07	TP-08	TP-09	TP-12	TP-13	TP-14-DIS
Aluminum	5,710	4,980	5,940	4,980	7,790	2,000
Antimony	<12	53.3	15.6	20.6	13.5	<12
Arsenic	14.0	61.5	55,0	125	11.0	6.8
Barium	1,150	1,020	1,160	801	359	136
Beryllium	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cadmium	3.84	8.65	7.96	10.7	2.49	<2.0
Calcium	9,910	9,030	9,150	7,610	4,400	5,230
Chromium	63.5	131	84.1	53.8	50.8	14.5
Cobalt	<10	< 10	11.9	<10	< 10	<10
Copper	304	396	658	373	261	51.2
Iron	14,700	28,900	48,600	89,600	20,100	1,030
Lead	1,650	1,550	2,260	1,340	694	277
Magnesium	1,960	1,180	1,720	1,840	1,970	1,050
Manganese	195	246	380	532	231	82.1
Mercury	28.3	2.11	4.02	3.10	7,10 .	0.52
Nickel	37.7	62.9	67.1	70.2	35.8	62.0
Potassium	-650	443	591	515	668	429
Selenium	1.6	4.1	<1.0	3.9	6.7	<1.0
Silver	23.3	3.4	<2.0	<2.0	<2.0	<2.0
Sodium	377	383	381	362	376	771
Thallium	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium ·	29.2	34.3	21.1	29.0	27.5	29.6
Zinc	733	1,730	2,040	2,180	579	114
Total Cyanides	5.72	9.45	7.84	9.20	17.9	11.4
Petroleum Hydrocarbons	1,010	1,380	1,030	2,970	339	not analyz

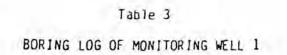


** METALS - indicates excessive of 3 or more metals, otherwise specific metals are shown.



Table 1
SOIL BORING DESCRIPTIONS

Boring No.	Depth (inches)	Soil Description
M1186	0-6	Brown silt, friable, dry; trace fill (glass, white accretions)
	6-12	Brown sandy silt; dry, friable; some fill (black slag, grayish accretions)
	12-18	Fill (blackish brown woody fibers, decomposed brick, greenish smears and trace white accretions)
M1187	0-7	Poor recovery
	7-12	Grey and brown sand; some pebbles, dry, friable little sand accretions
	12-18	Moist black sand with black smears and fill (asphalt-like slag, blueglass, wood fibers, trace brick); distinct petroleum odor
M1243E	0-5 5-9 1-14 14-18	Fill (slag, trace silty) Fill (asphalt, slag, some silt) Same, little glass and silt Fill (cemented accretions, blue, white and gray)
M1234E2	0-5	Reddish brown silty sand with few pebbles, little greyish brown accretions
	5-15	black silt and fill (glass, slag) distinct petroleum odor
	15-18	Same, but some dense whitish crystalline deposits
M1243E3	0-4	No recovery .
	4-10	Fill (yellowish accretions, slag, glass in brownish sandy silt matrix)
	10-15	Fill (bluish-black slag, silt, trace glass, brick and yellow accretions)
	15-18	Brown sandy silt and fill (slag, glass, yellow flakes, pebbles)



Boring No.	Depth (feet)	Soil Description
M2050	0-0.5	Brown silt, moist, dense with 20% pebbles; and fill (miscellaneous); trace clay
	0.5-1.0	Same with more fill (asphalt-like material, glass, brick); distinct petroleum odor
	1.0-1.5	Dry brown silt and fill (dense black asphalt- like material; slag, brick, yellow white par- ticles on asphalt surface)
	3.0-4.0	moist black silt, friable with trace fill (tarry material); distinct petroleum odor
	4.0-4.5	Same but some dense oil covered silt and little construction debris (decomposed brick, slag and glass)
M2052	8-8.5	Dense, friable black silt, moist; some fill (glass); distinct petroleum odor
	8.5-9.0	Fill (coarse gravel, pebbles, multicolored undifferentiated waste), moist
	9.0-10.0	<pre>fill (glass, pebbles, tar, paint chips, concre- tions of slag and brick); distinct petroleum odor</pre>
	13-14	Gray-brown silt clay coated with oily leachate, red streaks, very sticky, very plastic
	14-14.5	Same with oily smears but no red streaks
	14.5-15.0	Brown clay with some silt and sand grading to a sandy clay, rust streaks; weak petroleum odor

Table 6

Results of Analyses

Sample #	H 11	86 M 118	37 M 124	M 2050	M 2052	>M 1218
Units	ug/	kg ug/i	g ug/ke	g ug/kg	ug/kg	ug/L
Date of Submission	25-A			07-May		27-May
Location		-1 G-		WELL #3		WELL 13
Depth	0-1	B- 0-18	0-18	0-18"	8-10	
Composite/Discrete			D (. D	D D	D
Soil/Water		S	s · s	s s	S	W
VOLATILE ORGANICS						
Detactor Dellings						
Priority Pollutants Benzene		ID 22	O ND	1.6	ND	ND
		75				
Ethylbenzene		D 13				UJ3 ND U
Methylene chloride		4 4				
Toluene	N	D 24	5 8	ND	ND	ND
Totals	8	4 636	192	3.4	0	0
Volatile Organics, Additi	onal Peaks	(Semi-Quant	itative)			
2-Propanone	29	e no	ND	ND	ND	
2-Propanone	NI		ND.	ND	ND	
Dimethyl Benzene	NI			ND	ND.	4.5
				3. 4. 4	12	
ACID EXTRACTABLES						
2,4-Dimethylphenol	ND	ND			ND	ND
Phenol	ND	ND	ND	430	ND	ND
BASE/NEUTRAL EXTRACTA	BLES					
Acenaphthene	ND	74,400	11,000	2,710	3,660	ND
cenaphthylene	2,100	30,800	3,000 J	BMDL	1,430	ND
nthracene	8, 240	18,600		4,820	8,350	ND
enzidine	ND	ND	ND	ND	ND	ND
enzo(a)anthracene	14,200	23,180	30, 200 J	12,100	9,250	ND
enzo(a)pyrene	11,500	150,000	49,000 J		12,900	ND
enzo(b)fluoranthene	7,300	214,100		20,500	14,300	ND
enzo(ghi)perylene	7,200	101,800	33,500 J		7,560	ND
is(2-Ethylhexyl)phthalate	940	ND	and the second of the second o	"2,540	13,500	ND
-Chloronaphthalene	ND	ND	4,300 J		ND	ND
rysene			and the same of the State of th		200	1000
	17,000	21,060	31,100 J		9,760	ND
benzo(a,h)anthracene	1,500	79,650	9,700 J		1,910	ND
-n-butyl phthalate	ND	ND	2,900 J		1,040	ND
uoranthene	24,700	348,000	47,400 J		11,600	ND
uorene	13,900	292,000	16,000 J		12,900	ND
deno(1,2,3-c,d)pyrene	5,100	62,830	23,700 J		4.930	ND
phthalene	36,500	790,000	28, 200 J		28,600	ND
enanthrene	54,000	822,000	52.400 J		35,200	ND
rene	38,700	472,000	61,600 J	26,000	15,200	ND
tals	242,880	3,500,420	478,100 1	48,090	192.090	0
	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	DESCRIPTION OF STATE	With the state of	TO DATE OF THE PARTY OF THE PAR		2

J-Estimated concentrations; two surrogates out of control limits.

UJ1-Estimated quantitation limit 11.7 ug/]

UJ2-Estimated quantitation limit 4.2 ug/kg

Table 6 (continued)

Sample #	M 118	6 M 1187	M 1243	H2050	H 2052	
Units	uq/k	g ug/kg	ug/kg	ug/kg	ug/kg	ug/E
Date of Submission	25-Ap	r 25-Apr	25-Apr	07-May	07-May	27-May
Location	G-	1 G-2	COMP	WELL #3	WELL #3	WELL 1
Depth	0-18	0-18"	0-18".	0-18-	8-10	
Composite/Discrete		D D	C	D	D	D
Soil/Water		s s	5	S	S	W
Base/Neutral/Acid Extractab	les, Add	itional Peaks	(Semi-Qu	uantitati	ve)	
Parameter	M1186	M1187	M1243	M2050	M2052	M1218
14-Benzo(B)Fluorene	NI	81,700	- ND	ND	ND	. ND
1-Methyl Anthracene	NI	128,000	ND	ND	ND	ND
1.1'-Biphenyl	NI		ND	ND	241	ND
1.1-Biphenyl	ND	93,100	ND	ND	ND	ND
2-Ethyl Naphthalene	ND		8,190	ND	ND	ND
2-Methyl I.1-Biphenyl	ND		ND	ND	ND	ND
2-Methyl Anthracene	ND		ND	ND	ND	ND
2-Methyl Anthracene	9.580		ND	ND	ND	ND
2-Methyl Naphthalene	12,100	1 ND	ND	ND	ND	ND
2-Methyl Naphthalene	ND		15,400	ND.	ND	ND.
2-Methyl Phenanthrene	9,330	70.73	ND	- ND	ND	ND
3-Methyl Phenanthrene	ND.	194,000	ND	ND	ND	ND
4-Methyl Phenanthrene	ND	106,000	ND	ND	ND	ND
4-Methyl Phenanthrene ·	ND	ND	7,550	ND	ND	ND
Alkane	ND	ND	9,360	ND	ND	ND
Alkane	ND	ND	ND	ND	412	ND
Alkane	7,890	ND	ND	ND	ND.	ND
Cyclohexene, Pentyl	7,610	ND	ND	ND	ND	ND
Dibenzothiophene	ND.	ND	ND	ND	305	ND
	ND	ND	ND	ND	276	ND
Diethyl Benzene	ND	ND	ND	2,830	ND	ND
Dimethyl 2-Pentene		ND	ND	3,700	ND	ND
Dimethyl Naphthalene	ND ND	ND	ND	ND	ND	ND
Dimethyl Naphthalene	26,000		ND	ND	3,037	ND
Dimethyl Naphthalene	ND ND	DEA OOO	ND	ND	ND	ND
Dimethyl Naphthalene		854,000	24,500	ND	ND	ND
Dimethyl Naphthalene	ND	ND OOD	ND	ND	ND	ND
Dimethyl Phenanthrene	ND TOO	109,000 ND	ND	ND	ND	ND
Dimethyl Phenanthrene	7.720	1,53,52	ND	1,570	ND	ND
Dimethyl Phenol	ND	ND	ND		ND	ND
Ethyl Naphthalene	ND	58,100	ND	ND	364	ND
Ethyl-Dimethyl Benzene	ND	ND		ND		ND
Ethyl-Methyl Benzene	ND	ND	6,470	4.0	ND	
Ethyl-Methyl Benzene	ND	ND	ND	1.770	ND	ND
Ethyl-Methyl Benzene	ND	49,600	ND	ND	ND	ND
Ethyl-Methyl Benzene	ND	ND	ND	ND	940	ND
Methyl 9H-Fluorene	ND	ND	ND	ND	373	ND
Methyl Anthracene	ND	ND	ND	ND	927	ND
Methyl Benzene	ND	ND	ND	1,670	ND	7
Methyl Fluorene	ND	184,900	ND	ND	ND	ND
Methyl Naphthalene	ND	1,170,000	ND	ND	ND	ND
Machiel Machabalana	ND	ND	ND	6,780	ND	ND
Methyl Naphthalene	20,000	140	ND	ND	ND	ND

	Table 6 (continued)						
Sample :	H 1186	M 1187	H 1243	M 2050	H 2052	M 1218	
Units	ug/kg	ug/kg	uq/kq	The state of the s			
Date of Submission	25-Apr	25-Apr	25-Apr		07-May	27-May	
Location	G-1	G-2	The second second second	WELL #3	WELL 13		
Depth	0-18"	0-18-	0-18"	0-18"	8-10'	College (
Composite/Discrete	D	D	C	D	D	D	
Soil/Water	S	S	s	S	S	W	
Methyl Naphthalene	ND	ND	ND	ND	4,150		
Methyl Naphthalene	ND.	ND	27,900	ND	ND		
Methyl Phenanthrene	10,500	ND	ND	ND	ND		
Methyl Phenanthrene	ND-	, ND	ND.	ND.	569	ND	
Methyl Phenol	ND .	ND	ND	6, 190	. ND	ND	
Methyl-Methyl Ethyl Benzene	ND	ND	NĎ	ND	440	ND	
Naphthalene, Decahydro, Trans		ND.	ND	ND	ND	ND	
Naphthalene, Decahydro, Trans	ND	ND	7, 290	ND	ND	ND	
Propyl Benzene	ND	ND.	- ND	0	353	ND	
Tetramethyl Benzene	ND.	ND	6,990	ND	ND	ND	
Tetramethyl Benzene	ND .	ND	ND	2,040	ND	ND	
Trimethyl Benzene	ND	ND	6,120	ND	ND.	ND	
Trimethyl Naphthalene	ND !	210,000	ND	. ND	ND	ND	
Trimethyl Naphthalene	ND	ND ND	ND	ND	627	ND	
Xylene	ND	ND	6,810	. ND	ND	ND	
Xylene	ND	ND	ND	ND	236	ND.	
TOTAL PHENOLICS AND CYANIDES UNITS	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/I	
Phenolics, Total	0.32	0.63	0.08	2.80	1.5	4.05	
Cyanide, Total	0.75	4.4	15	1.1		<.025	
РСВ							
		10 C T 10 C T 1 C					
- 	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	
UNITS Aroclor 1254		ug/kg ND	ug/kg ND	ug/kg ND	ND		
JNITS 	18,000 J1 ND					UG/L ND ND	
UNITS Aroclor 1254 Aroclor 1260 ETALS	18,000 J1 ND	ND ND	ND	ND 23000 J1	ND ND	ND	
UNITS Aroclor 1254 Aroclor 1260 ETALS	18,000 J1	ND	ND	ND	ND	ND ND	
UNITS Aroclor 1254 Aroclor 1260 ETALS NITS Arimony	18,000 J1 ND	ND ND	ND ND	ND 23000 J1	ND ND	ND ND	
UNITS Aroclor 1254 Aroclor 1260 ETALS NITS Arimony	18,000 J1 ND mg/kg	ND ND mg/kg	ND ND mg/kg	ND 23000 J1 mg/kg	ND ND mg/kg	ND ND	
UNITS Aroclor 1254 Aroclor 1260 ETALS NITS ntimony rsenic	18,000 J1 ND mg/kg 1.7 26	MD MD mg/kg 1.4 1.200	ND ND mg/kg	ND 23000 J1 mg/kg	ND ND mg/kg	ND ND ug/L	
UNITS Aroclor 1254 Aroclor 1260 ETALS NITS	18,000 J1 ND mg/kg	MD MD mg/kg 1.4 1.200 0.46	MD MD mg/kg 5.6 25	ND 23000 J1 mg/kg 15 760	MD MD mg/kg 6.7	ND ND ug/L 3.1	
Aroclor 1254 Aroclor 1260 Arocl	18,000 J1 ND mg/kg 1.7 26 0.11	mg/kg 1.4 1.200 0.46 3.2	ND ND mg/kg 5.6 25 0.46 33	ND 23000 J1 mg/kg 15 760 0.6 18	MD MD mg/kg 6.7 46 0.44 12	ND ND ug/L 3.1 2 ND	
UNITS Aroclor 1254 Aroclor 1260 ETALS NITS Antimony rsenic eryllium admium hromium	18,000 J1 ND mg/kg 1.7 26 0.11 4	mg/kg 1.4 1.200 0.46 3.2 60	MD MD mg/kg 5.6 25 0.46 33 860	ND 23000 J1 mg/kg 15 760 0.6 18 240	mg/kg 6.7 46 0.44 12 240	ND ND 3.1 2 ND 0.83 1.4	
UNITS Aroclor 1254 Aroclor 1260 ETALS NITS ntimony rsenic eryllium admium hromium	18,000 J1 ND mg/kg 1.7 26 0.11 4 43 91	mg/kg 1.4 1.200 0.46 3.2 60 250	MD MD mg/kg 5.6 25 0.46 33 860 2,560	ND 23000 J1 mg/kg 15 760 0.6 18 240 690	mg/kg 6.7 46 0.44 12 240 530	ND ND 3.1 2 ND 0.83 1.4 7.8	
Aroclor 1254 Aroclor 1260 ETALS INITS ntimony rsenic eryllium admium hromium opper	18,000 J1 ND mg/kg 1.7 26 0.11 4 43 91 1,390	mg/kg 1.4 1.200 0.46 3.2 60 250 740	mg/kg 5.6 25 0.46 33 860 2,560 4,100	ND 23000 J1 mg/kg 15 760 0.6 18 240 690 3,000	mg/kg 6.7 46 0.44 12 240 530 1,840	ND ND 3.1 2 ND 0.83 1.4 7.8 ND	
Aroclor 1254 Aroclor 1260 ETALS INITS Intimony rsenic eryllium admium hromium opper ead proury	18,000 J1 ND mg/kg 1.7 26 0.11 4 43 91 1,390 2.4	mg/kg 1.4 1.200 0.46 3.2 60 250 740 1.3	mg/kg 5.6 25 0.46 33 860 2.560 4,100 3.7	ND 23000 J1 mg/kg 15 760 0.6 18 240 690 3,000 3.9	mg/kg 6.7 46 0.44 12 240 530 1.840 11.1	ND ND Ug/L 3.1 2 ND 0.83 1.4 7.8 ND ND	
Aroclor 1254 Aroclor 1260 SETALS NITS ntimony rsenic eryllium admium hromium opper ead ercury	18,000 J1 ND mg/kg 1.7 26 0.11 4 43 91 1,390 2.4 38	mg/kg 1.4 1.200 0.46 3.2 60 250 740 1.3 120	mg/kg 5.6 25 0.46 33 860 2.560 4,100 3.7 340	ND 23000 J1 mg/kg 15 760 0.6 18 240 690 3,000 3.9 120	mg/kg 6.7 46 0.44 12 240 530 1,840 11.1 73	ND ND 3.1 2 ND 0.83 1.4 7.8 ND ND	
Aroclor 1254 Aroclor 1260 METALS INITS Intimony Intimony Interpolation Adminish the company Interpolation Intimony Int	18,000 J1 ND mg/kg 1.7 26 0.11 4 43 91 1,390 2.4 38 ND	mg/kg 1.4 1.200 0.46 3.2 60 250 740 1.3 120 ND	mg/kg 5.6 25 0.46 33 860 2.560 4.100 3.7 340 ND	ND 23000 J1 mg/kg 15 760 0.6 18 240 690 3,000 3.9 120 1.8	mg/kg 6.7 46 0.44 12 240 530 1,840 11.1 73 ND	ND Ug/L 3.1 2 ND 0.83 1.4 7.8 ND ND ND ND	
UNITS Aroclor 1254 Aroclor 1260 METALS	18,000 J1 ND mg/kg 1.7 26 0.11 4 43 91 1,390 2.4 38	mg/kg 1.4 1.200 0.46 3.2 60 250 740 1.3 120	mg/kg 5.6 25 0.46 33 860 2.560 4,100 3.7 340	ND 23000 J1 mg/kg 15 760 0.6 18 240 690 3,000 3.9 120	mg/kg 6.7 46 0.44 12 240 530 1,840 11.1 73	ND ND 3.1 2 ND 0.83 1.4 7.8 ND ND	

JI- Estimated concentration; sample reextracted past holding time allowed under 40 CFR part 136

Table 6 (continued)

units Date of Submission Location Depth Composite/Discrete Soil/Water	M 1186 ug/kg 25-Apr G-1 0-18"	M 1187 ug/kg 25-Apr G-2 0-18 D	M 1243 ug/kg 25-Apr COMP 0-18"	M2050 ug/kg 07-May WELL #3 0-18" D	M 2052 ug/kg 07-May WELL #3 8-10* D	åg/L 27-May
PESTICIDES						
4,4'-DDT	ND	ND	ND	ND	3000 J	1 ND
4,4'-DDE	ND	ND	2,900 J	1 ND	610 J	1 ND
4.4'-DDD	ND	ND	ND	ND	1500 J	1 ND
Endrin aldehyde	ND	530 J1	. ND	ND	ND	ND
Heptachlor epoxide	ND	2.800 J1	840 J		ND	ND

J1-Estimated concentration; sample reextracted past holding time allowed under 40 CFR part 136



400 Middlesex Avenue Carteret, NJ 07008 (732) 969-2700 Fax (732) 969-2701

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Thomas M. Tomassetti

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LETTER OF TRANSMITTAL

03/18/04

Kelly Fifer

ATTENTION

RE

JOB NO.

8188

ECO TES) _ABORATORIES, INC. • ENVIRONMENTAL TESTING 377 Sheffield Avenue, North Babylon, New York 11703 (631) 422-5777 • FAX (631) 422-5770 • Email: ecotestlab@aol.com

CHAIN OF CUSTODY RECUAD

Client: C	ODE	ENVI	RONM	ENTEL	SE	2vice 3	LNE]				/ji	Ϋ́РE.		JIVIE(E - (OJF (CJÓ)NFIZ				
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Person rec	eiving	report:	Tom	Tom	955E	thi	-	1			/.	1		X /	//	1	///	Za de	P E	8/ NITE	FINESOW PINA
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EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 117 631 422-5777 11703

LAB NO.240597.01

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D:1025

MATRIX: Extract SAMPLE: ASP-1 Comp

ASP-1 Comp

TCLP

				DATE OF	ANALYTICAL
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS LRL	METHOD
Carbon Tetrachloride	ug/L	< 1		02/25/04 1	EPAB260
Chlorobenzene	ug/L	< 1		02/25/04 1	EPA8260
Chloroform	ug/L	< 1		02/25/04 1	EPA8260
1.4 Dichlorobenzene (v)	ug/L	1		02/25/04 1	EPA8260
1,2 Dichloroethane	ug/L	< 1		02/25/04 1	EPA8260
1.1 Dichloroethene	ug/L	< 1		02/25/04 1	EPA8260
Methyl Ethyl Ketone	ug/L	62		02/25/04 10	EPA8260
Tetrachloroethene	ug/L	16		02/25/04 1	EPA8260
Irichloroethylene	ug/L	6		02/25/04 1	EPA8260
inyl Chloride	ug/L	< 1		02/25/04 1	EPA8260
Jenzene	ug/L	3		02/25/04 1	EPA8260
ICLP Zero Headspace Extr	act			02/19/04	EPA1311

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

of 12

NYSDOH ID # 10320

LAB NO. 240597.01

03/04/04

Code Environmental Services, Inc. 400 Middlesex Avenue

Carteret, NJ 07008

Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D:1025

MATRIX: Extract SAMPLE: ASP-1 Comp ASP-1 Comp

TCLP

	2.020			DATE OF	ANALYTIC	AL
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS I	AL METHOD	
Lindane	ug/L	< 0.5	-	03/01/04 0	5 EPA8081	
Endrin	ug/L	< 0.5		03/01/04 0		
Methoxychlor	ug/L	< 1		03/01/04 1	EPA8081	
Toxaphene	ug/L	< 10		03/01/04 10	EPASOB1	
Chlordane	ug/L	< 2		03/01/04 2	EPA8081	
Heptachlor	ug/L	< 0.5		03/01/04 0	.5 EPA8081	
Heptachlor Epoxide	ug/L	< 0.5		03/01/04 0	.5 EPA8081	
2.4-D	ug/L	< 1		02/28/04 1	EPA8151	
-2,4,5-TP	ug/L	< 0.5		02/28/04 0		
-Methylphenol (o-cresol)	ug/L	< 10		02/25/04 1		
J-Methylphenol (m-cresol)	ug/L	< 10		02/25/04 1		
4-Methylphenol (p-cresol)	ug/L	< 10		02/25/04 1		
Pentachlorophenol (ms)	ug/L	< 100		02/25/04 1		
2.4.5-Trichlorophenol	ug/L	< 10		02/25/04 1		
2.4.6-Trichlaraphenol	ug/L	< 10		02/25/04 1		
2,4-Dinitrotoluene	ug/L	< 10		02/25/04 1		
Hexachlorobenzene	ug/L	< 10		02/25/04 1		
Hexachlorobutadiena	ug/L	< 10		02/25/04 1		
Hexachloroethane	ug/L	< 10		02/25/04 1		
Nitrobenzene	ug/L	< 10		02/25/04 1		
Pyridine	ug/L	< 10		02/25/04 1	D EPA8270	

TCLP Extraction

02/19/04

DIRECTOR

EPA1311

cc:

LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

LAB NO.240597.01

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #020100 SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 Collect DATE COL'D:02/18/04 RECEIVED:02/19/04

MATRIX: Extract SAMPLE: ASP-1 Comp

ASP-1 Comp

TCLP

.atals, QCQA

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

Page

NYSDOH ID # 10320

LAB NO.240597.01

MATRIX: Soil

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D:1025

SAMPLE: ASP-1 Comp

ASP-1 Comp Results reported on a dry weight basis

	Results reported on a dry weight Dasis							
Constitution of the state of the state of			DATE OF ANALYTICAL					
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG ANALYSIS LRL METHOD					
Dichlordifluoromethane	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
Chloromethane	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
Vinyl Chloride	ug/Kg	< 1300	03/03/04 1298.7 EPAB260					
Bromomethane	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
Chloroethane	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
Frichlorofluoromethane	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
1.1 Dichlorgethene	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
Methylene Chloride	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
t-1,2-Dichloroethene	ug/Kg	< 1300	03/03/04 1298.7 BPA8260					
1 Dichloroethane	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
.,2-Dichloropropane	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
o-1.2-Dichloroethene	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
Bromochloromethane	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
Chloroform	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
111 Trichloroethane	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
Carbon Tetrachloride	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
1,1-Dichloropropene	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
Benzene	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
1,2 Dichloroethane	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
frichloroethylene	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
1,2 Dichloropropane	ug/Kg	< 1300	03/03/04 1298.7 RPA8260					
Dibromomethane	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
3romodichloromethane	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
3-1,3Dichloropropenc	ug/Kg	< 1300	03/03/04 1298.7 EPA8260					
Foluene	ug/Kg	60000	03/03/04 1298.7 BPA8260					
cc:			And the state of t					

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

Page of 12

LAB NO.240597.01

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti ATTN:

PD#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Rayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D:1025

MATRIX: Soil

SAMPLE: ASP-1 Comp ASP-1 Comp

Results reported on a dry weight basis

	I.	it Desi	ANALYTICAL		
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG ANALYSIS		METHOD
t-1,3Dichloropropene	ug/Kg	< 1300	03/03/04		EPA8260
112 Trichloroethane	ug/Kg	< 1300	03/03/04		
l'etrachloroethene	ug/Kg	3000	03/03/04		EPA8260
1,3-Dichloropropane	ug/Kg	< 1300	03/03/04		EPA8260
Chlorodibromomethane	ug/Kg	< 1300	03/03/04		EPA8260
1,2 Dibromoethane	ug/Kg	< 1300	03/03/04		EPA8260
Chlorobenzene	ug/Kg	< 1300	03/03/04		EPA8260
Ethyl Benzene	ug/Kg	10000	03/03/04		EPA8260
1112Tetrachloroethane	ug/Kg	< 1300	03/03/04	298.7	EPA8260
+ p Xylene	ug/Kg	42000	03/03/04		EPA8260
Xylene	ug/Kg	19000	03/03/04	298.7	EPA8260
Styrene	ug/Kg	3600	03/03/04		EPA8260
Bromoform	ug/Kg	< 1300	03/03/04	1298.7	
Isopropylbenzene	ug/Kg	1600	03/03/04		EPA8260
Bromobenzene	ug/Kg	< 1300	03/03/04		EPA8260
1122Tetrachloroethane	ug/Kg	< 1300	03/03/04		
123-Trichloropropane	ug/Kg	< 1300	03/03/04		
a-Propylbenzene	ug/Kg	2900	03/03/04		EPA8260
2-Chlorotoluene	ug/Kg	< 1300	03/03/04		EPA8260
135-Trimethylbenzene	ug/Kg	7000	03/03/04		EPA8260
4-Chlarataluene	ug/Kg	< 1300	03/03/04		
tert-Butylbenzene	ug/Kg	< 1300	03/03/04		
124-Trimethylbenzene	ug/Kg	16000	03/03/04		
sec-Butylbenzene	ug/Kg	< 1300	03/03/04		
<pre>>-Isopropyltoluene cc;</pre>	ug/Kg	1300	03/03/04	1298.7	EPA8260

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

NYSDOH ID # 10320

LAB NO.240597.01

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum. #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1025

MATRIX: Soil

SAMPLE: ASP-1 Comp

ASP-1 Comp

· y	Results reported on a dry weight basis								
			DATE OF		ANALYTICAL				
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG ANALYSIS	LRL	METHOD				
1.3 Dichlorobenzene (v)	ug/Kg	< 1300	03/03/04	1298.7	EPA8260				
1,4 Dichlorobenzene (v)	ug/Kg	< 1300	03/03/04	1298.7	EPA8260				
n-Butylbenzene	ug/Kg	< 1300	03/03/04	1298.7	EPA8260				
1,2 Dichlorobenzene (v)	ug/Kg	< 1300	03/03/04	1298.7	BPA8260				
Dibromochloropropane	ug/Kg	< 1300	03/03/04	1298.7	EPA8260				
124-Trichlorobenzene (v)	ug/Kg	< 1300	03/03/04	1298.7	EPA8260				
Hexachlorobutadiene	ug/Kg	< 1300	03/03/04	1298.7	EPA8260				
Naphthalene(v)	ug/Kg	7300	03/03/04						
123-Trichlorobenzene	ug/Kg	< 1300	03/03/04						
ir.ButylMethylEther	ug/Kg	< 1300	03/03/04						
Ethyltoluene	ug/Kg	14000	03/03/04	1298.7	EPA8260				
Freon 113	ug/Kg	< 1300	03/03/04						
1245 Tetramethylbenz	ug/Kg	8800	03/03/04						
Acetone	ug/Kg	< 13000	03/03/04						
Methyl Ethyl Ketone	ug/Kg	< 13000	03/03/04	12987.	EPA8260				
Methylisobutylketone	ug/Kg	< 13000	03/03/04	1298/.	EPA8260				
Chlorodifluoromethane	ug/Kg	< 1300	03/03/04						
p Diethylbenzene	ug/Kg	< 1300	03/03/04	1298.7	BPA8260				
MS Library Search (Vol) Library Search. VOC					Contracta.				
% Solids VOC QCQA		77	02/20/04	0.1	SM182540G				

cc:

LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

Page

DIRECTOR

NYSDOH ID # 10320

LAB NO.240597.01

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188

DATE COL'D:02/18/04 RECEIVED:02/19/04 TIME COL'D:1025 COLLECTED BY: Client

MATRIX: Soil

SAMPLE: ASP-1 Comp ASP-1 Comp

Results reported on a dry weight basis

DIRECTOR

			-	DATE OF		ANALYTICAL
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS	LRL	METHOD
N-Nitrosodimethylamine	ug/Kg	< 780		03/03/04		
Bis(2-chloroethyl)ether	ug/Kg	< 780		03/03/04		
1.3 Dichlorobenzene(sv)	ug/Kg	< 780		03/03/04		
1,4 Dichlorobenzene(sv)	ug/Kg	< 780		03/03/04		
1,2 Dichlorobenzene(sv)	ug/Kg	< 780		03/03/04		
Bis(2-chloroisopropyl)ether	ug/Kg	< 780		03/03/04		
N-Nitrosodi-n-propylamine	ug/Kg	< 780		03/03/04		
Hexachloroethane	ug/Kg	< 780		03/03/04		
Nitrobenzene	ug/Kg	< 780		03/03/04		
cophorone	ug/Kg	3600		03/03/04		
_is(2-chloroethoxy)methane	ug/Kg	< 780		03/03/04	779.22	EPA8270
124-Trichlorobenzene (sv)	ug/Kg	2100		03/03/04		
Naphthalene(av)	ug/Kg	9600		03/03/04		
Hexachlorobutadiene	ug/Kg	< 780		03/03/04	779.22	EPA8270
Hexachlorocyclopentadiene	ug/Kg	< 7800		03/03/04	7792.2	EPAB270
2-Chloronaphthalene	ug/Kg	< 780		03/03/04		
Dimethyl Phthalate	ug/Kg	< 780		03/03/04	779.22	EPA8270
Acenaphthylene	ug/Kg	< 780		03/03/04	779.22	EPA8270
2.6-Dinitrotoluene	ug/Kg	< 780		03/03/04		
Acenaphthene	ug/Kg	< 780		03/03/04	779.22	EPA8270
2,4-Dinitrotoluene	ug/Kg	< 780		03/03/04	779.22	BPA8270
Diethyl Phthalate	ug/Kg	1600		03/03/04	779.22	EPA8270
fluorene	ug/Kg	< 780		03/03/04	779.22	EPA8270
6-Chlorophenyl phenyl ether		< 780		03/09/04	779.22	EPA8270
N-Nitrosodiphenylamine	ug/Kg	16000		03/03/04	779.22	EPAB270

LRL=laboratory Reporting Limit

BEMARKS:

of 12

rn = 5289

NYSDOH ID # 10320

LAB NO.240597.01

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188

COLLECTED BY: DATE COL'D:02/18/04 RECEIVED:02/19/04 Client

TIME COL'D: 1025

MATRIX: Soil

SAMPLE: ASP-1 Comp ASP-1 Comp

Results reported on a dry weight basis

			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DATE OF		ANALYTICAL
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS	LRL	METHOD
1,2-Diphenylhydrazine	ug/Kg	< 780		03/03/04	779.22	EPA8270
4-Bromophenyl phenyl ether	ug/Kg	< 780		03/03/04		
Hexachlorobenzene	ug/Kg	< 780		03/03/04		
Phenanthrene	ug/Kg	3500		03/03/04	779.22	EPA8270
Anthracene	ug/Kg	830		03/03/04		
Di-n-Butyl Phthalate	ug/Kg	26000		03/03/04	779.22	EPAB270
Fluoranthene	ng/Kg	1700		03/03/04		
Benzidine	ug/Kg	< 7800	*	03/03/04	7792.2	EPA8270
Pyrene	ug/Kg	6400	*	03/03/04	779.22	EPA8270
nzylButylPhthalate	ug/Kg	61000	*	03/03/04		
_enzo(a)anthracene	ug/Kg	1400	*	03/03/04		
3,3'-Dichlorobenzidine	ug/Kg	< 7800	**	03/03/04	7792.2	EPA8270
Chrysene	ug/Kg	2100	*	03/03/04		
Bis(2-ethylhexyl)phthalate	ug/Kg	260000	1.0	03/02/04		
Di-n-octyl Phthalate	ug/Kg	4900	**	03/03/04		
Benzo(b)fluoranthene	ug/Kg	1500	春水木			
Benzo(k)fluoranthene	ug/Kg	1500	非大大			
Benzo(a) pyrene	ug/Kg	1200	**	03/03/04		
Indeno(1,2,3-ed)pyrene	ug/Kg	1200	**	03/03/04		
Dibenzo(a,h)anthracene	ug/Kg	< 780	**	03/03/04	779.22	EPA8270
Benzo(ghi)perylene	ug/Kg	1600	**	03/03/04	779.22	EPA8270

Base Neutrals QAQC MS Library Search (BN)

cc:

LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

*,**Estimated due to low internal standard recovery, *22% & **11%. Low recovery due to interference. QC limit is 50%. #Total = 3000 ug/Kg, unable to separate isomers.

DIRECTOR

rn = 5290

NYSDOH ID # 10320

LAB NO.240597.01

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti

PO#:

SOURCE OF SAMPLE: SOURCE OF SAMPLE: COLLECTED BY: Bayonne Barrel and Drum, #628188
Bayonne Barrel and Drum, #628188
Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D:1025

MATRIX: Soil

SAMPLE: ASP-1 Comp

ASP-1 Comp

Results reported on a dry weight basis

DIRECTOR

				DATE OF		ANALYTICAL	
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS	LRL	METHOD	
Phenol	ug/Kg	2300		03/03/04		EPA8270	
2-Chlorophenol	ug/Kg	< 780		03/03/04			
2-Nitrophenol	ug/Kg	< 780		03/03/04	779.22	EPA8270	
2,4-Dimethylphenol	ug/Kg	< 780		03/03/04	779.22	EPA8270	
2,4-Dichlorophenol	ug/Kg	< 780		03/03/04			
4-Chloro-3-methylphenol	ug/Kg	< 780		03/03/04	779.22	EPA8270	
2,4,5-Trichlorophenol	ug/Kg	< 780		03/03/04	779.22	EPA8270	
4-Nitrophenol	ug/Kg	< 7800		03/03/04	7792.2	EPA8270	
2.4-Dinitrophenol	ug/Kg	< 7800		03/03/04	7792.2	EPA8270	
-Methyl-4,6-dinitrophenol	ug/Kg	< 7800		09/03/04	7792.2	EPA8270	
intachlorophenol (ms)	ug/Kg	< 7800		03/03/04	7792.2	EPA8270	

45 Library Search (AE)

loid Ex. QAQC

cc:

LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

NYSDOH ID # 10320

LAB NO.240597.01

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

P0#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1025

MATRIX: Soil

SAMPLE: ASP-1 Comp ASP-1 Comp

Results reported on a dry weight basis

DIRECTOR

DATE OF ANALYTICAL ANALYTICAL PARAMETERS FLAG ANALYSIS LRL METHOD UNITS RESULT 03/01/04 6.4935 EPA6010 03/01/04 3.2467 EPA6010 Antimony as Sb mg/Kg 100 Arsenic as As < 3.2 mg/Kg 03/01/04 0.6493 EPA6010 03/01/04 3.2467 EPA6010 03/01/04 3.2467 EPA6010 Beryllium as Be mg/Kg < 0.65 mg/Kg 120 mg/Kg 2200 mg/Kg 1100 mg/Kg 12000 mg/Kg 47 Cadmium as Cd Chromium as Cr 03/01/04 6.4935 EPA6010 03/01/04 3.2467 EPA6010 02/24/04 2.5974 EPA7470A Copper as Cu Lead as Pb Mercury as Hg 03/01/04 6.4935 EPA6010 03/02/04 2.5974 EPA7740 03/03/04 0.7272 EPA7760A Nickel as Ni mg/Kg 160 elenium as Se mg/Kg 5.2 liver as Ag mg/Kg 18 03/01/04 6.4935 EPA6010 03/01/04 6.4935 EPA6010 mg/Kg < 6.5 Thallium as T1 Zinc as Zn mg/Kg 2900 Metals. QCQA

cc:

LRL=laboratory Reporting Limit

REMARKS:

Page 10 of 12

NYSDOH ID # 10320

LAB NO.240597.01

03/04/04

Code Environmental Services. Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628168 SOURCE OF SAMPLE: Bayonne Barrel and Drum. #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1025

MATRIX: Soil

SAMPLE: ASP-1 Comp

ASP-1 Comp Results reported on a dry weight basis

		DATE OF	ANALYTICAL
ANALYTICAL PARAMETERS UNITS	RESULT FLA	AG ANALYSIS LRL	METHOD
Lindane ug/Kg	< 65	03/02/04 64.935	EPA8081
Heptachlor ug/Kg	< 65	03/02/04 64.935	EPA8081
Aldrin ug/Kg	< 65	03/02/04 64.935	EPA8081
Heptachlor Epoxide ug/Kg	< 65	03/02/04 64.935	EPA8081
p,p-DDE ug/Kg	520	03/02/04 64.935	EPA8081
Dieldrin ug/Kg	< 65	03/03/04 64.935	EPA8081
Endrin ug/Kg	< 65	03/03/04 64.935	EPABD81
p.p-DDD ug/Kg	140	03/02/04 64.935	EPA8081
p,p-DDT ug/Kg	< 130	03/02/04 129.87	EPA8081
hlordane ug/Kg	< 260	03/02/04 259.74	EPA8081
ug/Kg	< 1300	03/02/04 1298.7	EPA8081
Endrin Aldehyde ug/Kg	< 390	03/03/04 389.61	EPA8081
a BHC ug/Kg	< 65	03/02/04 64.935	
o BHC ug/Kg	< 65	03/02/04 64.935	
1 BHC ug/Kg	< 65	03/02/04 64.935	
Indosulfan 1 ug/Kg	< 130	03/02/04 129.87	EPA8081

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LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

Page 11

LAB NO.240597.01

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue

Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

Bayonne Barrel and Drum, #628188
Bayonne Barrel and Drum, #628188
Client DATE COL'D:02/18/04 RECEIVED:02/19/04 SOURCE OF SAMPLE: SOURCE OF SAMPLE:

COLLECTED BY:

TIME COL'D:1025

MATRIX: Soil

SAMPLE: ASP-1 Comp

ASP-1 Comp Results reported on a dry weight basis

		1000000	DATE OF		ANALYTICAL
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG ANALYSIS		
Endosulfan 2	ug/Kg	< 130	03/03/04	129.87	EPABOB1
Endosulfan Sulfate	ug/Kg				EPA8081
Pest QAQC	500	7.123.7			211111111
Aroclor 1016	ug/Kg	< 1300	03/02/04	1298.7	EPA8082
Aroclor 1221		< 1300			EPA8082
Aroclor 1232		< 1300			EPA8082
Aroclor 1242	ug/Kg				EPA8082
Aroolor 1248		< 1300			EPA8082
Aroclor 1254	ug/Kg				EPA8082
roclor 1260	ug/Kg	< 1300			EPA8082
Cyanide as CN	mg/Kg	11	02/25/04	2.5974	EPA335.3
Phenois as Phonoi		8.1			EPA420.1
Reactive cyanide	mg/Kg	< 2.6	02/25/04	2.5974	EPA335.4
Sulfide as S	mg/Kg	< 2.6			EPA376.2
oH (lab) units		7.0			EPA9045C
Flash Point deg C		> 100	02/23/0		EPA1010
Quality Control				2.545	00431-042

cc:

LRL=laboratory Reporting Limit

REMARKS:

Page 12 of 12

DIRECTOR

NYSDOH ID # 10320

			1E	. 5075 X-702.0		SAMPLE	NO.
		VOLATILE ORGANI TENTATIVELY	ICS ANALYSIS DI IDENTIFIED COMI		1	2405	97.01
Lab Name: ECOT	EST LABS		Contract:				
Project No.:		Site:	Location:			Group:	
Matrix: (soil/water)	Soil			U	ab Sample ID:	240597.01	
Sample wt/vol:	5.0	(g/mL) g			Lab File ID:	03020428.	.D
ovel: (low/mod)	Low			D	ate Received:	2/19/04	
6 Solid:	77 .			D	ate Analyzed:	3/3/04	
3C Column:	MXT-624	ID: 0.5	i3 (mm)		ilution Factor:		
Soil Extract Volume		(mL)			iquot Volume:	71.75	(UL)
Number TICs found	0		Concentration (ug/L or u	on Units:	ug/Kg		
	CAS Number		ound Name	RT	Est. Conc.	0	ľ
	1.	No unknown TIC	's detected.				
	3.			-			1
	4.		9.7.		17		
	5.	11 2					1
	6.		5.4				
	7.						1
	8.			-	-		-
	9.			+	-	-	1
	11.			1		-	1
	12.		1425	1	1		1
	13.						1
	14.						1
	15.			-	-		ł
	16.		441144	-			1
	18.	-	-	-	+		1
	19.			1	+		ť
	20.		-	-		V	
	21.	1 100 000		-			1
	22.	9 9 9 9 9	10.6				1
	23.						
	24.	4					1
	25.						4
	26.				-		1
	27.			-			1
	28.			+	-	-	-
	30.						1
	7.5			1			-4

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO. 240597.01

Leb Name: ECOTEST	LABS		Contract:		
Project No.:	_	Site:	Location:		Group:
Matric (soil/water)	SOIL	2 2 2 2 2		Lab Sample ID;	597.01
Sample w/vol:	DILUTION	_(g/mL)		Lab File ID: 030	30415.D
Level: (low/med)	LOW			Date Received: 2/	19/04
% Moisture:		decanted: (Y	(N)	Date Extracted: 2	27/04
Concentrated Extract V	olume:			Date Analyzed: 3	/3/04
Injection Volume:	1.0	_(uL)		Dilution Factor.	0.00
GPC Cleanup: (Y/N)			pH:		
Number TICs found:	13		Concentration (ug/L or ug/		

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 123-42-2	2-Pentarione, 4-hydroxy-4-met	4.55	32000	1
2. 111-48-6	Ethanol, 2,2'-oxybis-	6,24	19000	J
3. 673-94-9	Cyclohexanone, 3,3,5-trimeth	6.41	2700	J
4. 135-98-8	Benzene, (1-methylpropyl)-	6.44	4600	J
5. 768-00-3	Benzene, (1-methyl-1-property	7,26	6300	1
6. 85-44-9	Phthelic anhydride	8.44	19000	J
7. 74630-39-0	1-Undecene, 4-methyl-	9.12		. 7
8. 628-62-9	Pentadecane	9.35	5600	J
9. 13151-34-3	Decane, 3-methyl-	9.70	6000	J
10. 3179-47-3	2-Propencic acid, 2-methyl-,	9.75		J
11, 70-55-3	Benzenesulfonamide, 4-methyl	10.50	12000	J
12. 55045-08-4		10.93		J
13. 112-75-4	1-Tetradecanamine, N,N-dimet	12.68	9700	1
14.				
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CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Client - Code Environmental Services

Lab Sample ID Filename Total Amount Extracted ICAL Date

CCal Filename(s)

U40225A 11 20.0 g 10/03/2003

BLANK-4388 U40225A_08 & U40225A_23 Matrix Dilution Extracted Analyzed

Injected By

Solid NA 02/23/2004 02/25/2004 17:01

SMT

Native Isomers	Conc ng/Kg	ng/Kg	LRL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2.3.7.8-TCDF	0.11		0.100 J	2.3.7.8-TCDF-13C	2.00	56
Total TCDF	0.35	1	0.100 J	2,3,7,8-TCDD-13C	2.00	59
			2012	1.2.3.7.8-PeCDF-13C	2.00	53
2,3,7,8-TCDD	ND		0.110 A	2,3,4,7,8-PeCDF-13C	2.00	53
Total TCDD	ND		0.100	1,2,3,7,8-PeCDD-13C	2.00	55
			0.700	1,2,3,4,7,8-HxCDF-13C	2.00	52
1,2,3,7,8-PeCDF	ND	-	0.500	1,2,3,6,7,8-HxCDF-13C	2.00	62
2.3.4.7.8-PeCDF	ND		0.500	2,3,4,6,7,8-HxCDF-13C	2.00	59
Total PeCDF	ND		0.500	1,2,3,7,8,9-HxCDF-13C	2.00	54
rotati econ	140	-	W. Chill	1,2,3,4,7,8-HxCDD-13C	2.00	58
1,2,3,7,8-PeCDD	ND	-	0.500	1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	-	0.500	1,2,3,4,6,7,8-HpCDF-13C	2.00	62
Total P GCDD	ND		0.500	1,2,3,4,7,8,9-HpCDF-13C	2.00	54
1,2,3,4,7,8-HxCDF	ND		0.500	1,2,3,4,6,7,8-HpCDD-13C	2.00	60
1,2,3,6,7,8-HxCDF	ND		0.500	OCDD-13C	4.00	51
2,3,4,6,7,8-HxCDF	ND	-	0.500	CCDD-13C	4.00	91
1,2,3,7,8,9-HxCDF	ND	-		4 0 0 4 TODD 400	2.00	NA
Total HxCDF			0.500	1,2,3,4-TCDD-13C	2.00	
TOTAL MIXCUIT	ND		0.500	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-	0.500	2.3,7.8-TCDD-37CI4	0.20	65
1,2,3,6,7,8-HxCDD	ND	-	0.500	4,01,10 ,000 0, 0,		47
1,2,3,7,8,9-HxCDD	ND	446	0.500			
Total HxCDD	ND	*****	0.500			
	-		5.000			
1,2,3,4,6,7,8-HpCDF	ND	diam'	0.500	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-	0.500	Equivalence: 0.011 ng/Kg		
Total HpCDF	ND	-	0.500	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND		0.500			
Total HpCDD	0.56	-	0.500 J			
OCDF	ND	200	1.000			
OCDD	ND		1.000			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

LRL = Lower Reporting Limit

J = Concentration detected is below the calibration range

P = Recovery outside of target range

A = Detection Limit based on signal-to-noise measurement

(= Interference E = PCDE Interference ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

Report No.....1084865

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700 Fax: 612-607-6444

Method 8290 Laboratory Control Spike Results

Client - Code Environmental Services

Lab Sa	ample ID
Filena	
Total A	mount Extracted
ICAL D	Date
	ilename(s)

Method Blank ID

LCS-4389 U40225A_09 20.0 g 10/03/2003 U40225A_08 & U40225A_23 BLANK-4388

Matrix Dilution Extracted Analyzed Solid NA 02/23/2004

Analyzed 02/25/2004 15:22 Injected By SMT

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.18	88	2,3,7,8-TCDF-13C	2.00	59
				2,3,7,8-TCDD-13C	2.00	61 57
2,3,7,8-TCDD	0.00	040	92	1,2,3,7,8-PeCDF-13C	2.00	58
2,3,7,6-1000	0.20	0.18	82	2,3,4,7,8-PeCDF-13C 1,2,3,7,8-PeCDD-13C	2.00	60
				1,2,3,4,7,8-HxCDF-13C	2.00	53
1,2,3,7,8-PeCDF	1.00	0.91	04	1,2,3,6,7,8-HxCDF-13C	2.00	65
2,3,4,7,8-PeCDF	1.00	0.87	91 87	2,3,4,6,7,8-HxCDF-13C	2.00	63
2,3,4,7,0-FBCDF	1.00	0.07	0/	1 2 2 7 8 0 LIVEDE 12C	2.00	58
				1,2,3,7,8,9-HxCDF-13C	2.00	57
1,2,3,7,8-PeCDD	1.00	0.95	95	1,2,3,4,7,8-HxCDD-13C	2.00	75
1,2,3,7,0-F6000	1.00	0.95	93	1,2,3,6,7,8-HxCDD-13C	2.00	63
				1,2,3,4,6,7,8-HpCDF-13C	2.00	57
122478 UNDE	4.00	0.00	00	1,2,3,4,7,8,9-HpCDF-13C		
1,2,3,4,7,8-HxCDF	1.00	0.95	95	1,2,3,4,6,7,8-HpCDD-13C	2.00	63
1,2,3,6,7,8-HxCDF	1.00	0.95	95	OCDD-13C	4.00	55
2,3,4,6,7,8-HxCDF	1.00	0.95	95	4 4 4 4 7 4 7 4 7 4 7 4 7 4 7 4 7 7 7 7	0.00	414
1,2,3,7,8,9-HxCDF	1.00	0.93	93	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.92	92	2,3,7,8-TCDD-37Cl4	0.20	75
1,2,3,6,7,8-HxCDD	1.00	0.96	96	2,0,1,0 1000 01014	0.20	
1,2,3,7,8,9-HxCDD	1.00	0.99	99			
(Lief. John Lines	1.00	0.00				
1,2,3,4,6,7,8-HpCDF	1.00	0.99	99			
	1.00					
1,2,3,4,7,8,9-HpGDF	1.00	1.02	102			
1,2,3,4,6,7,8-HpCDD	1.00	1.02	102			
OCDE	0.00	4.04	00			
OCDF	2.00	1.84	92			
OCDD	2.00	2.01	100			

Qs = Quantity Spiked Qm = Quantity Measured

Rec. = Recovery (Expressed as Percent)

P = Recovery outside of target range

X = Background subtracted value

Nn = Value obtained from additional analysis

NA = Not Applicable
" = See Discussion

Report No....1084865

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700 Fax: 612-607-6444

Method 8290 Analysis Results

Client - Code Environmental Services

Client's Sample ID Lab Sample ID Filename Injected By **Total Amount Extracted** % Moisture Dry Weight Extracted

ICAL Date

CCal Filename(s) Method Blank ID

ASP-1 COMP 105346472 U40225B_15 SMT 13.3 g 24.5

10.0 g 10/03/2003 U40225A_23 & U40225B_23 **BLANK-4388**

Matrix Dilution Collected Received

Extracted

Analyzed

Soil 02/18/2004 02/19/2004 02/23/2004 02/26/2004 07:52

,					Tillady Cook State of the Cook		
Native Isomers	Cone ng/Kg	EMPC ng/Kg	LRL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	1400	*****	21.0	A	2,3,7,8-TCDF-13C	2.00	61
Total TCDF	28000	***	1.0		2,3,7,8-TCDD-13C	2.00	68
	20000				1,2,3,7,8-PeCDF-13C	2.00	63
2,3,7,8-TCDD	29	*****	7.4	A	2,3,4,7,8-PeCDF-13C	2.00	58
Total TCDD	310	-	1.0		1,2,3,7,8-PeCDD-13C	2.00	70
	725		100		1,2,3,4,7,8-HxCDF-13C	2.00	66
1,2,3,7,8-PeCDF	630	****	5.0		1,2,3,6,7,8-HxCDF-13C	2.00	60
2,3,4,7,8-PeCDF		2100	6.3	EA	2,3,4,6,7,8-HxCDF-13C	2.00	65
Total PeCDF	20000	_100	5.0		1,2,3,7,8,9-HxCDF-13C	2.00	65
12000	20000		0.0		1,2,3,4,7,8-HxGDD-13C	2.00	84
1,2,3,7,8-PeCDD	26		5.0		1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	410	_	5.0		1,2,3,4,6,7,8-HpCDF-13C	2.00	69
CITY SEEE	4.0		0.0		1,2,3,4,7,8,9-HpCDF-13C	2.00	57
1,2,3,4,7,8-HxCDF	3600	-	6.8	A	1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	1100		9.0		OCDD-13C	4.00	73
2,3,4,6,7,8-HxCDF	550		9.5		0000 100	4.00	, ,
1,2,3,7,8,9-HxCDF	180	0.0	9.4		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	12000		5.0	-	1,2,3,7,8,9-HxCDD-13C	2.00	NA
	.2000	- care	UiU		I E O I I O O O O	2.00	1111
1,2,3,4,7,8-HxCDD	-	53	7.7	IA	2,3,7,8-TCDD-37Cl4	0.20	79
1,2,3,6,7,8-HxCDD	220		7.5		2,0,7,0-1000-07014	0.20	, ,
1,2,3,7,8,9-HxCDD	81		7.0				
Total HxCDD	1800	-	5.0				
	1000		0.0				
1,2,3,4,6,7,8-HpCDF	10000		31.0	A	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	270		56.0		Equivalence: 1000 ng/Kg		
Total HpCDF	11000		5.0		(Using ITE Factors)		
	71000		5.0		(Osing 112 Factors)		
1,2,3,4,6,7,8-HpCDD	3700		12.0	A			
Total HpCDD	7200		5.0				
			0				
OCDF	8200		14.0	A			
OCDD	57000	*****	10.0				

Results reported on a dry weight basis Conc = Concentration (Totals Include 2,3,7,8-substituted isomers) EMPC = Estimated Maximum Possible Concentration
A = Detection Limit based on signal-to-noise measurement J = Concentration detected is below the calibration range B = Less than 10 times higher than method blank level P = Recovery outside of target range Nn = Value obtained from additional analysis

LRL = Lower Reporting Limit I = Interference

E = PCDE interference

S = Saturated signal ND = Not Detected

NA = Not Applicable NC = Not Calculated

= See Discussion

Report No.....1084865

REPORT OF LABORATORY ANALYSIS

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LETTER OF TRANSMITTAL 400 Middlesex Avenue June 8, 2004 628188 Carteret, NJ 07008 ATTENTION (732) 969-2700 Fax (732) 969-2701 Kelly Fifer Bayonne Barrel & Drum "Complete Solutions To Your Environmental Concerns" de maximis, inc. 186 Center Street, Suite 290 Clinton, New Jersey (908) 735-0315 WE ARE SENDING YOU X Attached Under separate cover via the following items: Shop drawings Prints Plans Samples Specifications Copy of Letter Change Order COPIES DATE NO. DESCRIPTION 2 June 7, 2004 Ash Pile 1-4 Waste Profiles. THESE ARE TRANSMITTED as checked below: For approval Approved as submitted Resubmit copies for approval X For your use Approved as noted Submit copies for distribution As requested Returned for corrections Return corrected prints For review and comment FOR BIDS DUE PRINTS RETURNED AFTER LOAN TO US 20 REMARKS:

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Clinton, N	lew Jersey	(908) 735-93	315			
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CHAIN OF CUSTODY RECUAD

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Relinquishe			re)	DATE/TI	ME SE	AL INT	ACT?	Rece	ived	by:	(Sign	natur	e)	_				_	Signature)	DA	TE/TIME		Received by: (Signature)
Dentamble		4		1	V. 1111	s NO		11			7		-			esen			7			YES NO NA	Representing:

LAB NO.240597.02

03/04/04

PO#:

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

SOURCE OF SAMPLE: SOURCE OF SAMPLE: COLLECTED BY: Bayonne Barrel and Drum, #628188
Bayonne Barrel and Drum. #628188
Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1320

MATRIX: Extract SAMPLE: ASP-2 Comp

ASP-2 Comp

TCLP

				DATE OF		ANALYTICAL
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS	LRL	METHOD
Carbon Tetrachloride	ug/L	< 10		02/25/04	10	EPAB260
Chlorobenzene	ug/L	13		02/25/04		EPA8260
Chloroform	ug/L	< 10		02/25/04	10	EPA8260
1,4 Dichlorobenzene (v)	ug/L	< 10		02/25/04	10	EPA8260
1,2 Dichloroethane	ug/L	19		02/25/04	10	BPA8260
1,1 Dichloroethene	ug/L	< 10		02/25/04	10	EPA8260
Methyl Ethyl Ketone	ug/L	870		02/25/04	100	EPA8260
Tetrachloroethene	ug/L	110		02/25/04	10	EPA8260
Prichloroethylene	ug/L	220		02/25/04	10	EPA8260
nyl Chloride	us/L	35		02/25/04	10	EPA8260
· anzene	ug/L	82		02/25/04	10	EPA8260
TCLP Zero Headspace Extract				02/19/04		EPA1311

cc:

LRL=laboratory Reporting Limit

REMARKS: Increases LRL due to high concentration of non target

DIRECTOR

compounds.

Page

NYSDOH ID # 10320

ECOTEST LABS INC

LAB NO.240597.02

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1320

MATRIX: Extract SAMPLE: ASP-2 Comp

ASP-2 Comp

TCLP

				DATE OF	ANALYTICAL
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS LRI	METHOD
Lindane	ug/L	< 0.5	2,000	03/01/04 0.5	EPA8081
Endrin	ug/L	< 0.5		03/01/04 0.5	EPA8081
Methoxychlor	ug/L	< 1		03/01/04 1	EPA8081
Toxaphene	ug/L	< 10		03/01/04 10	EPA8081
Chlordane	ug/L	< 2		03/01/04 2	EPA8081
Heptachlor	ug/L	< 0.5		03/01/04 0.5	EPA8081
Heptachlor Epoxide	mg/L	< 0.5		03/01/04 0.5	BPA8081
2,4-D	ug/L	1.8		02/28/04 1	EPA8151
2.4.5-TP	ug/L	3.6		02/28/04 0.5	EPA8151
-Methylphenol (o-orccol)	ug/I.	81		02/25/04 10	EPA8270
-Methylphenol (m-cresol)	ug/L	100	#	02/25/04 10	EPA8270
4-Methylphenol (p-cresol)	ug/L	100	#	02/25/04 10	EPA8270
Pentachlorophenol (ms)	ug/L	< 100		02/25/04 100	EPA8270
2,4,5-Trichlorophenol	ug/L	< 10		02/25/04 10	EPA8270
2,4,6-Trichlorophenol	ug/L	< 10		02/25/04 10	EPA8270
2,4-Dinitrotoluene	ug/L	< 10		02/25/04 10	EPA8270
Hexachlorobenzene	ug/L	< 10		02/25/04 10	EPA8270
Hexachlorobutadiene	ug/L	< 10		02/25/04 10	EPA8270
Hexachlorosthane	ug/L	< 10		02/25/04 10	EPA8270
Nitrobenzene	ug/L	< 10		02/25/04 10	EPA8270
Pyridine	ug/L	< 10		02/25/04 10	EPA8270

TCLP Extraction

02/19/04

DIMECTOR

EPA1311

co:

LRL=laboratory Reporting Limit

HEMARKS: #Total = 200 ug/L, unable to separate isomers.

Page 2 of 12

rn = 5296

NYSDOH ID # 10320

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 1170 631 422-5777 11703

LAB NO.240597.02

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: SOURCE OF SAMPLE: COLLECTED BY: Bayonne Barrel and Drum, #628188 Bayonne Barrel and Drum, #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04 TIME COL'D:1320

MATRIX: Extract SAMPLE: ASP-2 Comp

ASP-2 Comp

TCLP

INII SWITCHT DANGERSON	*****	Acres as	الماء المصا	DATE OF	ANALYTICAL	
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS LRL	METHOD	
Arsenic as As	mg/L	< 0.1		03/01/04 0.1	EPA6010	
Barium as Ba	mg/L	2.4		03/01/04 0.05	EPA6010	
Cadmium as Cd	mg/L	0.34		03/01/04 0.05	EPA6010	
Chromium as Cr	mg/L	< 0.05		03/01/04 0.05	EPA6010	
Lead as Pb	mg/L	13		03/01/04 0.05	EPA6010	
Mercury as Hg	mg/L	< 0.001		02/24/04 0.00	EPA7470A	
Selenium as Se	mg/1.	< 0.1		03/01/04 0.1	EPA6010	
Silver as Ag	mg/L	< 0.05		03/01/04 0.05	EPA6010	
TCLP Extraction				02/19/04	EPA1311	

etals, QCQA

cc:

LRL=laboratory Reporting Limit

Page

REMARKS:

of 12

rn = 5297 NYSDOH ID # 10320

LAB NO.240597.02

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti ATTN:

PO#:

Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: SOURCE OF SAMPLE:

Bayonne Barrel and Drum, #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04 COLLECTED BY:

TIME COL'D:1320

MATRIX: Soil

SAMPLE: ASP-2 Comp

ASP-2 Comp Results reported on a dry weight basis

	120			DATE OF	7.07	ANALYTICAL
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS	LRL	METHOD
Dichlordifluoromethane	ug/Kg	< 6200	4 4314	03/03/04		EPA8260
Chloromethane	ug/Kg	< 6200		03/03/04		
Vinyl Chloride	ug/Kg	< 6200		03/03/04		
Bromomethane	ug/Kg	< 6200		03/03/04		
Chloroethane	ug/Kg	< 6200		03/03/04		
Trichlorofluoromethane	ug/Kg	< 6200		03/03/04		
1,1 Dichloroethene	ug/Kg	< 6200		03/03/04		
Methylene Chloride	ug/Kg	27000		03/03/04		
t-1,2-Dichloroethene	ug/Kg	< 6200		03/03/04		
1 Dichloroethane	ug/Kg	11000		03/03/04		
,2-Dichloropropane	ug/Kg	< 6200		03/03/04		
c-1,2-Dichloroethene	ug/Kg	< 6200		03/03/04		
Bromochloromethane	ug/Kg	< 6200		03/03/04		
Chloroform	ug/Kg	< 6200		03/03/04		
111 Trichloroethane	ug/Kg	< 6200		03/03/04		
Carbon Tetrachloride	ug/Kg	< 6200		03/03/04		
1.1-Dichloropropene	ug/Kg	< 6200		03/03/04		
Benzene	ug/Kg	< 6200		03/03/04		
1,2 Dichloroethane	ug/Kg	< 6200		03/03/04		
Trichloroethylene	ug/Kg	42000		03/03/04		
1.2 Dichloropropane	ug/Kg	< 6200		03/03/04		
Dibromomethane	ug/Kg	< 6200		03/03/04		
Bromodichloromethane	ug/Kg	< 6200		03/03/04		
c-1,3Dichloropropene	ug/Kg	< 6200		03/03/04		
Toluene	ug/Kg	3800000		03/03/04		
cc:	-0, -0			,, 44		
7.7.0						

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

of 12 Page

LAB NO.240597.02

03/04/04

Code Environmental Services, Inc. 400 Middlesex Avenue

Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

Bayonne Barrel and Drum, #628188
Bayonne Barrel and Drum. #628188
Client DATE COL'D:02/18/04 RECEIVED:02/19/04 SOURCE OF SAMPLE:

SOURCE OF SAMPLE: COLLECTED BY:

TIME COL'D: 1320

MATRIX: Soil

SAMPLE: ASP-2 Comp ASP-2 Comp

Results reported on a dry weight basis

Section of the second				DATE OF		ANALYTICAL
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS	LRL	METHOD
t-1,3Dichloropropene	ug/Kg	< 6200		03/03/04	6172.8	EPA8260
112 Trichloroethane	ug/Kg	< 6200		03/03/04		
Tetrachloroethene	ug/Kg	69000		03/03/04	6172.8	EPA8260
1,3-Dichloropropane	ug/Kg	< 6200		03/03/04		
Chlorodibromomethane	ug/Kg	< 6200		03/03/04	6172.8	EPA8260
1,2 Dibromoethane	ug/Kg	< 6200		03/03/04	6172.8	EPA8260
Chlorobenzene	ug/Kg	< 6200		03/03/04		
Ethyl Benzene	ug/Kg	480000		03/03/04	6172.8	EPA8260
1112Tetraphloroethane	ug/Kg	< 6200		03/03/04	6172.8	EPA8260
+ p Xylene	ug/Kg	1600000		03/03/04		
Xylene	ug/Kg	460000		03/03/04		
Styrene	ug/Kg	220000		03/03/04	6172.8	EPA8260
lromoform .	ug/Kg	< 6200		03/03/04		
[sopropylbenzene	ug/Kg	40000		03/03/04		
Iromobenzene	ug/Kg	< 6200		03/03/04	6172.8	EPA8260
1122Tetrachloroethane	ug/Kg	< 6200		03/03/04		
.23-Trichloropropane	ug/Kg	< 6200		03/03/04		
1-Propylbenzene	ug/Kg	80000		03/03/04		
:-Chlorotoluene	ug/Kg	< 6200		03/03/04		
.35-Trimethylbenzene	ug/Kg	160000		03/03/04		
-Chlorotoluene	ug/Kg	< 6200		03/03/04		
ert-Butylbenzene	ug/Kg	< 6200		03/03/04		
24-Trimethylbenzene	ug/Kg	350000		03/03/04		
ec-Butylbenzene	ug/Kg	8500		03/03/04		
-Isopropyltoluene	ug/Kg	11000		.03/03/04	6172.8	EPAB260
CC:						

LRL=laboratory Reporting Limit

REMARKS:

Page

DIRECTOR

of 12

NYSDOH ID # 10320

LAB NO. 240597.02

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1320

MATRIX: Soil

SAMPLE: ASP-2 Comp ASP-2 Comp

Results reported on a dry weight basis

DIRECTOR

AND DESCRIPTION OF STREET			2.222 2.22	DATE OF		ANALYTICAL	
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS	LRL	METHOD	
1.3 Dichlorobenzene (v)	ug/Kg	< 6200	0.752	03/03/04			
1.4 Dichlorobenzene (v)	ug/Kg	< 6200		03/03/04			
n-Butylbenzene	ug/Kg	< 6200		03/03/04		EPA8260	
1.2 Dichlorobenzene (v)	ug/Kg	17000		03/03/04		EPA8260	
Dibromochloropropane	ug/Kg	< 6200		03/03/04		EPA8260	
124-Trichlorobenzene (v)	ug/Kg	< 6200		03/03/04			
Hexachlorobutadiene	ug/Kg	< 6200		03/03/04		EPA8260	
Naphthalene(v)	ug/Kg	190000		03/03/04		100 100 100 100 100 100 100 100 100 100	
123-Trichlorobenzene	ug/Kg	< 6200		03/03/04			
er. ButylMethylEther	ug/Kg	< 6200		03/03/04			
Ethyltoluene	ug/Kg	400000	4	03/03/04		EPA8260	
Freon 113	ug/Kg	< 6200		03/03/04			
1245 Tetramethylbenz	US/KS	93000		03/03/04			
Acetone	ug/Kg	< 62000		03/03/04		EPA8260	
Methyl Ethyl Ketone	ug/Kg	< 62000		03/03/04		EPA8260	
Methylisobutylketone	ug/Kg	< 62000		03/03/04		EPA8260	
Chlorodifluoromethane	ug/Kg	< 6200		03/03/04			
) Diethylbenzene	ug/Kg	< 6200		03/03/04			
(S Library Search (Vol)							
SOLIDS OC QCQA		81		02/20/04	0.1	SM182540G	

cc:

LRL=laboratory Reporting Limit

REMARKS: Library Search 1s attached.

of 12 Page

rn = 5300

NYSDOH ID # 10320

LAB NO.240597.02

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1320

MATRIX: Soil

SAMPLE: ASP-2 Comp ASP~2 Comp

Results reported on a dry weight basis

DIRECTOR

			Service division and and a	DATE OF	200	ANALYTICAL	
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS	LRL	METHOD	
N-Nitrosodimethylamine	ug/Kg	< 3700	10.25-775	03/02/04	3703.7	EPA8270	
Bis(2-chloroethy1)ether	ug/Kg	< 3700		03/02/04			
1.3 Dichlorobenzene(sv)	ug/Kg	< 3700		03/02/04			
1,4 Dichlorobenzene(sv)	ug/Kg	< 3700		03/02/04			
1,2 Dichlorobenzene(sv)	ug/Kg	< 3700		03/02/04	3703.7	EPA8270	
Bis(2-chloroisopropy1)ether	ug/Kg	< 3700		03/02/04			
N-Nitrosodi-n-propylamine	ug/Kg	< 3700		03/02/04			
Hexachloroethane	ug/Kg	< 3700	T 1	03/02/04	3703.7	EPA8270	
Nitrobenzene	ug/Kg	< 3700		03/02/04	3703.7	BPA8270	
-Isophorone	ug/Kg	25000		03/02/04			
is(2-chloroethoxy)methane	ug/Kg	< 3700		03/02/04	3703.7	EPA8270	
124-Trichlorobenzene (sy)	ug/Kg	8800		03/02/04	3703.7	EPA8270	
Naphthalene(sv)	ug/Kg	150000		03/02/04	3703.7	EPA8270	
Hexachlorobutadiene	ug/Kg	< 3700		03/02/04	3703.7	EPA8270	
Hexachlorocyclopentadiene	ug/Kg	< 37000		03/02/04	37037.	EPA8270	
2-Chloronaphthalene	ug/Kg	< 3700		03/02/04			
Dimethyl Phthalate	ug/Kg	7300		03/02/04	3703.7	EPA8270	
Acenaphthylene	ug/Kg	< 3700		03/02/04	3703.7	EPA8270	
2,6-Dinitrotuluene	ug/Kg	< 3700		03/02/04	3703.7	EPA8270	
Acenaphthene	ug/Kg	< 3700		03/02/04	3703.7	EPA8270	
2,4-Dinitrotoluene	ug/Kg	< 3700		03/02/04	3703.7	EPA8270	
Diethyl Phthalate	ug/Kg	26000		03/02/04	3703.7	EPA8270	
Fluorene	ug/Kg	5700		03/02/04	3703.7	EPA8270	
4-Chlorophenyl phenyl ether	us/Kg	< 3700		03/02/04			
N-Nitrosodiphenylamine	ug/Kg	200000		03/02/04	3703.7	EPA8270	

LRL=laboratory Reporting Limit

REMARKS:

Page

NYSDOH ID # 10320

EcoTest Laboratories 377 Sheffield Ave North Babylon, 11703 NY 631 422-5777

LAB NO.240597.02

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti ATTN:

6314225778

PO#:

Bayonne Barrel, and Drum, #628188 SOURCE OF SAMPLE: SOURCE OF SAMPLE:

Bayonne Barrel and Drum. #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04 COLLECTED BY:

TIME COL'D:1320

MATRIX: Soil

SAMPLE: ASP-2 Comp ASP-2 Comp

Results reported on a dry weight basis
DATE OF A ANALYTICAL ANALYTICAL PARAMETERS UNITS RESULT FLAG ANALYSIS LRL METHOD 03/02/04 3703.7 EPA8270 03/02/04 3703.7 EPA8270 1.2-Diphenylhydrazine ug/Kg < 3700 4-Bromophenyl phonyl ether < 3700 UB/KB Hexachlorobenzene < 3700 03/02/04 3703.7 EPA8270 ug/Kg 03/02/04 3703.7 EPA8270 03/02/04 3703.7 EPA8270 Phenanthrene ug/Kg 23000 Anthracene ug/Kg < 3/00 Di-n-Butyl Phthalate 03/02/04 3703.7 EPA8270 330000 ug/Kg 03/02/04 3703.7 EPA8270 Fluoranthene 8000 ug/Kg < 37000 Benzidine 03/02/04 37037. EPA8270 ug/Kg Pyrene 17000 03/02/04 3703.7 EPA8270 ug/Kg RenzylButylPhthalate ug/Kg 480000 03/03/04 37037. EPA8270 anzo(a)anthracene ug/Kg 03/02/04 3703.7 EPA9270 3700 03/02/04 37037. EPA8270 03/02/04 3703.7 EPA8270 03/03/04 37037. EPA8270 03/02/04 3703.7 EPA8270 3,3'-Dichlorobenzidine < 37000 ** ug/Kg Chrysene Bis(2-ethylhexyl)phthalate ug/Kg 5300 1400000 ug/Kg Di-n-octyl Phthalate 36000 ** ug/Kg 03/02/04 3703.7 BPA8270 Benzo(b)fluorantheno < 3700 ** ug/Kg Benzo(k) fluoranthene ug/Kg < 3700 ** 03/02/04 3703.7 EPA8270 Benzo(a)pyrene ug/Kg < 3700 女女 03/02/04 3703.7 EPAR270 Indeno(1,2,3-cd)pyrene ** 03/02/04 3703.7 EPA8270 ug/Kg < 3700 Dibenzo(a,h)anthracene 03/02/04 3703.7 EPA8270 ug/Kg ** < 3700 Benzo(ghi)perylene < 3700 ** 03/02/04 3703.7 EPA8270 ug/Kg

Base Neutrals QAQC MS Library Search (BN)

cc:

LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

*.**Estimated due to low internal standard recovery, *37% & **26%. Low recovery due to interference. QC limit is 50%.

DIRECTOR

NYSDOH ID # 10320

f 12

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 11703 631 422-5777

LAB NO.240597.02

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

P0#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 R

DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D:1320

MATRIX: Soil

SAMPLE: ASP-2 Comp ASP-2 Comp

Results reported on a dry weight basis

DIRECTOR

				DATE OF		ANALYTICAL	
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS	LRL	METHOD	
Phenol	ug/Kg	65000		03/02/04	3703.7	EPA8270	
2-Chlorophenol	ug/Kg	< 3700		03/02/04			
2-Nitrophenol	ug/Kg	< 3700		03/02/04	3703.7	EPAB270	
2.4-Dimethylphenol	ug/Kg	< 3700		03/02/04			
2,4-Dichlorophenol	ug/Kg	< 3700		03/02/04	3703.7	EPA8270	
4-Chloro-3-methylphenol	ug/Kg	< 3700		03/02/04	3703.7	BPA8270	
2.4.5-Trichlorophenol	ug/Kg	< 3700		03/02/04	3703.7	EPA8270	
4-Nitrophenol	ug/Kg	< 37000		03/02/04	37037.	EPA8270	
2.4-Dinitrophenol	ug/Kg	< 37000		03/02/04	37037.	EPA8270	
Methy)-4,6-dinitrophenol	ug/Kg	< 37000		03/02/04		EPA8270	
intachlorophenol (ms)	ug/Kg	< 37000		03/02/04	37037.	EPA8270	

45 Library Search (AE)

Acid Ex. QAQC

cc:

LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

NYSDOH ID # 10320

03/04/2024 12:11 5314225770

EcoTest Laboratories 377 Sheffield Ave North Babylon, NY 631 422-5777 Inc 11703

LAB NO.240597.02

03/04/04

Code Environmental Services, Inc.

400 Middlosex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D:1320

MATRIX: Soil

SAMPLE: ASP-2 Comp ASP-2 Comp

Results reported on a dry weight basis

DIRECTOR

CONTRACTOR OF THE STATE OF THE				DATE OF		ANALYTICAL
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS	LRL	METHOD
Antimony as Sb	mg/Kg	210		03/01/04		
Arsenic as As	mg/Kg	< 3.1		03/01/04		
Beryllium as Be	mg/Kg	< 0.62		03/01/04		
Cadmium as Cd	mg/Kg	110		03/01/04	3.0864	EPA6010
Chromium as Cr	mg/Kg	1400		03/01/04	3.0864	EPA6010
Copper as Cu	mg/Kg	840		03/01/04	6.1728	EPA6010
Lead as Pb	mg/Kg	7700		03/01/04	3.0864	EPA6010
Mercury as Hg	mg/Kg	4.4		02/24/04	0.2469	EPA7470A
Nickel as Ni	mg/Kg	84		03/01/04	6.1728	EPA6010
Selenium as Se	mg/Kg	< 9.9		03/02/04	9.8765	EPA7740
lver as Ag	mg/Kg	9.1		03/03/04	0.6913	EPA7760A
inallium as Tl	mg/Kg	< 6.2		03/01/04	6.1728	EPA6010
Zinc as Zn Metals, QCQA	mg/Kg	2300		03/01/04	6.1728	EPA6D10

oc:

LRL=laboratory Reporting Limit

REMARKS:

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NYSDOH ID # 10320

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, 631 422-5777 11703 NY

LAB NO.240597.02

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE:

Bayonne Barrel and Drum, #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04 COLLECTED BY:

TIME COL'D:1320

MATRIX:Soil

SAMPLE: ASP-2 Comp ASP-2 Comp

Results reported on a dry weight basis

The state of the s				DATE OF		ANALYTICAL	
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS	LRL	METHOD	
Lindane	ug/Kg	< 62		03/03/04	61.728	EPA8081	
Heptachlar	ug/Kg	< 62		03/03/04	61.728	EPA8081	
Aldrin	ug/Kg	< 62		03/03/04	61.728	EPA8081	
Heptachlor Epoxide	ug/Kg	< 62		03/03/04			
p,p-DDE	ug/Kg	300		03/03/04	61.728	EPABOB1	
Dieldrin	ug/Kg	< 62		03/03/04	61,728	EPA8081	
Endrin	ug/Kg	< 62		03/03/04	61.728	EPA8081	
P,P-DDD	ug/Kg	< 62		03/03/04	61.728	EPA8081	
p,p-DDT	ug/Kg	< 120		03/03/04	123.45	EPA8081	
Chlordane	ug/Kg	< 250		03/03/04	246.91	EPA8081	
oxaphene	ug/Kg	< 1200		03/03/04	1234.5	EPA8081	
endrin Aldehyde	ug/Kg	< 370		03/03/04	370.37	EPA8081	
a BHC	ug/Kg	< 62		03/03/04			
ь вис	ug/Kg	< 62		03/03/04	61.728	EPA8081	
d BHC	ug/Kg	< 62		03/03/04			
Endosulfan 1	ug/Kg	< 120		03/03/04	123.45	EPA8081	

cc:

LRL=laboratory Reporting Limit

REMARKS:

Page 1

NYSDOH ID # 10320

5314225778 03/04/2024 12:11

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, NY 631 422-5777 11703

LAB NO.240597.02

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PD#:

SOURCE OF SAMPLE: SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
Bayonne Barrel and Drum, #628188
Client DATE COL'D:02/18/04 RECEIVED:02/19/04

COLLECTED BY: Client

TIME COL'D:1320

MATRIX: Soil

SAMPLE: ASP-2 Comp ASP-2 Comp

Results reported on a dry weight basis

MANAGER MARKET NO DO NOT A STORY				DATE OF		ANALYTICAL	
ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	ANALYSIS			
Endosulfan 2	ug/Kg	< 120	306,519	03/03/04			
Endosulfan Sulfate	ug/Kg			03/03/04			
Pest QAQC						F4 44E,012	
Aroclor 1016	ug/Kg	< 1200		03/03/04	1234.5	BPA8082	
Aroolor 1221		< 1200		03/03/04			
Arpelor 1232		< 1200		03/03/04			
Aroclor 1242		< 1200		03/03/04			
Aroclor 1248		< 1200		03/03/04			
Aroclor 1254	ug/Kg			03/03/04			
Aroclor 1260	ug/Kg	< 1200		03/03/04			
yanide as CN	mg/Kg	5.6		02/25/04	2.4691	EPA335.3	
Thenols as Phenol		160				EPA420.1	
leactive cyanide	mg/Kg	< 2.5				EPA335.4	
Sulfide as S	mg/Kg	< 2.5				EPA376.2	
oH (lab) units		5.4		02/20/04			
lash Point deg C luality Control		> 100		02/23/04		EPA1010	

cc:

LRL=laboratory Reporting Limit

REMARKS:

Page 12

DIRECTOR

NYSDOH ID # 10320

10, 527-53-7 11, 874-35-1

12. 13. 14. 15. 16. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.

| | | 1E | | | SAMPLE | NO. |
|----------------------|--------------|--|----------------|--------------|-----------|--------|
| | | VOLATILE ORGANICS ANALYSIS (
TENTATIVELY IDENTIFIED CON | | | 240 | 597.02 |
| Lab Name: ECOTE | ST LABS | Contract | 1: | | | - |
| Project No.: | | Site: Location | 0 | | Group: | |
| Matrix: (soil/water) | Soil | | Lal | Sample ID: | 240597.02 | |
| Sample wt/vol: | 5.0 | (g/mL) g | | Lab File ID: | 03020429 | .0 |
| Level: (low/med) | Low | | Da | te Received: | 2/19/04 | - |
| % Solid: | 81 | | Da | te Analyzed | 3/3/04 | |
| GC Column: | MXT-624 | ID; 0,53 (mm) | DN | ution Factor | 5000.0 | |
| Soil Extract Volume: | | _(mL) | Soil Alic | juot Volume | 1 | (uL) |
| Number TICs found: | | Concentrat
(Ug/L or | and the second | ug/Kg | | |
| | CAS Number | Compound Name | RT | Est. Conc. | Q | Ĭ. |
| | 1. 142-82-5 | Heptene | 8.55 | 37000 | J | 1 |
| | 2. 108-87-2 | Cyclohexane, methyl- | 9.68 | 76000 | 1 | l. |
| | 3. 1678-91-7 | Cyclohexane, athyl- | 13,51 | 31000 | J |] |
| | 4. | Unknown Hydrocarbon | 14.22 | 40000 | |] |
| | 5. | Unknown Hydrocarbon | 16.85 | 130000 | J |] |
| | 6. 620-14-4 | Benzens, 1-ethyl-3-methyl- | 18.07 | 37000 | J | 1 |
| | 7. | Unknown Hydrocarbon | 19.58 | 45000 | | |
| | B. 527-84-4 | Benzene,1-mathyl-2-(1-mathy) | 20.26 | 50000 | J |] |
| | 9. 934-80-5 | Benzene,4-ethyl-1,2-dimethyl- | 20.41 | 70000 | J | 1 |

Benzene, 1,2,3.5-tetramethyl-1H-Indene, 2,3-dihydro-5-meth 21.24 62000 21.88 73000

6314225770 03/04/2024 15:33

| | 501.00 | 11 | a contract | والمستعددات | SAMPLE NO. |
|------------------------|------------|-------------------------------------|---------------|------------------|------------|
| | | POLATILE ORGANICS TENTATIVELY IDENT | | | 240597.02 |
| Let Neme: ECOTES | TLABS | | Contract: | | |
| Project No.: | _ | Site: | Location: | | Graup: |
| Matrix: (soil/water) | SOIL | | | Lab Sample ID: | 597.02 |
| Sample wt/vol: | DILUTION | (g/mL) | | Lab File ID: | 03010423.D |
| Level: (low/med) | LOW | | | Date Received: | 2/19/04 |
| % Molsture: | | decanted: (Y/N) | | Date Extracted: | 2/27/04 |
| Concentrated Extract \ | /olume: | 1000 (uL) | | Date Analyzed: | 3/2/04 |
| Injection Volume: | 1.0 | _(uL) | | Dilution Factor: | 3000.0 |
| GPC Cleanup: (Y/N) | No and the | pH: | | | |
| Number 710s Seconds | 46 | | Concentration | | |

| CAS Number | Compound Name | RT | Eat. Conc. | 0 |
|----------------|------------------------------|-------|------------|--------------|
| 1. 108-88-3 | Tolusne | 4.01 | 190000 | J |
| 2. 110-43-0 | 2-Heptsnane | 5.32 | 22000 | 1 |
| 3. 108-38-3 | Benzene, 1,3-dimethyl- | 5,36 | 110000 | 1 |
| 4, 111-76-2 | Ethanol, 2-butoxy- | 6.46 | 57000 | 1 |
| 5. 111-46-6 | Ethanol, 2,2'-oxybis- | 6.24 | 21000 | 1 |
| 6. 629-99-2 | Pentacosane | 6.30 | 45000 | J |
| 7. 95-63-6 | Benzene, 1,2,4-trimethyl- | 6.33 | 110000 | 1 |
| 8. 108-67-8 | Benzene, 1,3,5-trimethyl- | 6.58 | 76000 | 1 |
| 9, 934-74-7 | Benzena, 1-ethyl-3,5-dimethy | 6.85 | 64000 | J |
| 10. 535-77-3 | Benzene, 1-methyl-3-(1-methy | 7.08 | 85000 | J |
| 11. 1587-04-8 | Benzene, 1-methyl-2-(2-prope | 7.63 | 45000 | J |
| | Decane, 5-propyl- | 9.50 | 72000 | |
| 13. 13151-34-3 | Decane, 3-methyl- | 9.74 | 170000 | - 1 |
| 14. 62338-14-1 | Decane, 3,3,6-trimethyl- | 10.29 | 68000 | 1 |
| 15. 7098-22-8 | Tetratetracontane | 11.30 | 130000 | J |
| 16. | | 111 | 12 375 | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | The state of |
| 20. | | | | |
| 21. | | 5.8 | | |
| 22 | | | | |
| 23. | | | 100 | |
| 24, | | - | | |
| 25. | | | | |
| 26. | | | | 11 - |
| 27. | | | | |
| 28. | | | LOSS A | 7 |
| 29. | | 1 | 1. TV U | 7:- |
| 30. | | | | 7. 9 |



CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevent fields must be completed eccurately

| Required Client Information: Section A Required Client Information: Se | | | | | | | | | Client Information (Check quote/contract): | | | | | | | | ı. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------------------------------|-----------|------|-------|--------|---------------------|-------|-----|--|---------|----------------|----------------|----------------|-------|----------|---------|---------|--------|------|--------|------------|-------------|---------------|------------|---------|---------|-------|--------|------|------|------|-------|-----|--------|-------|-----|-------|------|-------|-------|------|-------|----------|-------|------------|-------|----|---------|
| Com | _ | | | | | | | _ | _ | | | - 10 | Dane | rt To | _ | nt Info | eme: | Jon: S | Sect | lo | пВ | Reques | nfor | nati | on (| Che | ckq | uot | e/co | ntra | ct); | _ | | To B | | | | _ | _ | _ | _ | _ | _ | ectio | on C | | _ | _ |
| 100 | | 6 | OD | E | EA | W | R | in | : 5 | de | 0; | IM | / | | / | ON | 1 | 200 | 195 | 50 | TH | | and L | ue i | DHO | 3 | -5 | - | 0 | 1 | | _ | | | | | | M | SI | Pi | 15 | 00 | 4 | | _ | | | |
| Addi | ess: | 40 | 0. | w | 000 | ÉS | Ex | 1 | 90 | E. | _ | | ору | 10: | C | DD, | E | EN | v. | 50 | ich, INC | TAT: | 10 | 1 | 30 | 5. | 0 | 23 | 5 | | | | | Proje | - | | jer: | | | | | | | | | | _ | |
| | - | CA | R. | TE | Re | =1 | 1 | U | - | 27 | 00 | 8 | nvoic | 20 10 | 2 | 00 | E | Ni | 1.5 | U | STNE | Turn neo | rid likn | es lo | po the | 14 di | nyo m | ubject | K. | | | | | Proje | ct #: | | | | | | | | | | | | | |
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169 | .2 | 70 | o F | 33 | ٠٠ | 96 | 9. | 27 | 101 | 1 | .0. | | 5 | 00 | \circ | 4 | | | | laboratory | and car | niraoi | uni ot | rigatio | ne on | nd me | y . | | | | 3 | Profil | 8 #: | 1 | 16 | 25 | 3 | 4 | 8 | 6 | 5 | | | | | |
| | × | | | | | | | | | | | F | roje | ct Na | me: | BA | 140 | NN | EL | 30 | MEL | in a Rush 1 | (MINISTRA | und t | Berchi | NO. | | | | | | - | 121 | | | | | | | | | | - 7 | | | 4 | | |
| | | | | | | | | | | | | F | rojec | et Nu | mbe | " (| 63 | 8 | 188 | 1 | | Tom Araus | 1 Time | CTAT | T; In c | alend e | n say | a, | | | | Ę | 1 | | | | | | | | | ۲ | | | | | | |
| 77 | R | aquir | ed C | Clien | t Info | rma | tion: | Se | cti | on | D | | | - 1 | | alid W | otrix i | odes | 7 | η | | | | Ţ | P | 7088 | rvet | ive | | 3 | | 0 | 000 | C. | R | equ | 85160 | d An | alysi | 0 | | | | - | | | | |
| TEM MUMBER | SAMPLE ID (One charater per box.) | | | | | Ticeue TS Cither OT | | | | | DATE COLLECTED | TIME COLLECTED | TIME COLLECTED | | - 19 3 1 | | | HNO3 | HCI | NaOH | Ne25203 | Methanol | 8,290/1613 | peoplecofo | | | | | | | | | | | REMA | ARK | 8/1 | ab 1 | D | | | | | | | | | |
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| 900 | Z | 15 | P | - | 12 | 5 | 1 | 0 | 14 | P | | | | | T | | | | 5 | | 2-14-0 | _ | - | 1 | X | | 1 | | | 'n | 1 | À | | | | 1 | | | | | | | | | | | 4 | 81 |
| 4 | 1 | 15 | D | - | 3 | | 2 | - | M | 1 | 1 | 1 | T | 1 | 1 | | | | 3 | 1 | 2-19-09 | 1:50 | $\overline{}$ | 1 | X | 1 | | | 7 | 1 | | X | | | | 1 | | | | | П | | 1 | | - | | d | 09 |
| A | | 1 | 0 | 1_ | 4 | | | 0 | N | 0 | | + | + | T | T | | 3, | 1 | 5 | | 2-18 04 | 2:2 | _ | 7 | V | 1 | 1 | 1 | 7 | 1 | 1 | X | 1 | 1 | 1 | 1 | | | | | П | | 1 | | | | 寸 | 30 |
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| | / | 10 | - | E | 1 | | ن | - | 10 | 6 | 1 | + | + | + | + | Н | H | + | 3 | 4 | 2-19-04 | 11.20 | 1 | H | 0 | + | + | + | 1 | + | - | 7 | + | + | ۲ | + | ۲ | - | - | - | Н | | + | 7 | 17 | _ | - | 20 |
| | ۲ | Ψ. | A | ۲ | - | Н | 9 | 4 | 74 | 4 | + | + | t | + | ۲ | Н | H | + | ۲ | 9 | 0.75-09 | 11-00 | + | + | 7 | + | + | + | + | + | + | 4 | + | + | ╁ | + | 1 | - | Н | - | | + | + | | V _ | - | 2 | U |
| - | H | + | - | - | Н | | + | + | - | - | + | + | + | H | H | Н | H | + | + | 1 | | _ | + | + | + | + | + | + | + | 1 | + | + | + | + | + | + | - | + | | | H | + | + | | - | _ | _ | _ |
| 15 | H | ╁ | | - | - | | + | + | \dashv | + | + | + | t | + | H | Н | + | + | + | + | - | | + | + | + | + | + | + | + | + | + | + | + | + | + | 1 | + | - | | | Н | + | + | | - | | - | |
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| 16 | L | + | | - | Н | - | - | - | - | 2.4 | + | + | + | - | H | H | + | + | + | - | 4==- | | - | + | + | + | + | + | + | + | + | ÷ | 1 | ╁ | ╁ | - | - | - | H | H | Н | + | + | | - | | - | _ |
| 1, | L | - | | - | Н | - | 4 | 4 | 4 | 4 | + | + | + | ┝ | - | Н | + | + | + | 4 | | _ | - | + | + | + | + | + | + | + | + | + | + | + | 1 | - | H | - | Н | - | H | + | + | _ | - | - | _ | _ |
| 17. | L | 17 | | | | 1 | 1 | | 111 | | 143 | 1 | | | | | | | | | | | 160 | 4 | 1 | 1 | 1 | | | | -1 | | | 1 | | | Δ. | | | | | | | | | ~ 111 | | To be |
| A SPET | | III W | | V 42 | 100 | 20. | | | | NO | | | | | 44 | NO | 0 | COO | LLRS | 4 | ITEM# | - | | | | JISI | | | | | | ON | | | DA. | | TIM | 4 | | | 1000 | 63-5 | -1 101-1 | JA LO | | | | |
| _(| 1 | 15 | 1 | 5.3 | | | - 2 | 3.3 | 5 | 3 | L | 2. | 13 | 24 | | | 1 | | | 4 | | A. | وليتما | 1. | 1 | 1 | 10 | ep | 1 | 44 | - | _ | _ | | 3 | 2 | 1 | 3 | | 11 | 4 | 13 | 1 | 26 | | 1/1 | 14 | 64 |
| AM | PLI | E CC | ONE | DIT | ON | _ | | | | | TES | | | | | | | | | 1 | | | | _ | | | | | _ | _ | _ | | _ | _ | L | | 1 | | 1 | _ | _ } | | -1 | | | | | _ |
| oc.b | in C | | | 25 | | _ | | | | 41: | | e p | | 1. 71 | | . 5 | 0 | ćν. | 1 | Ĺ | 1 | | | | _ | | | | _ | | | | | | - | _ | | | 1 | | | | | | | | | |
| (ecsi/ | ed d | on lex | | Υ. | N | | 7.4 | | | 34 | - | 2. | | 0.77 | | | | | | | | | | | | | | | | | | | | 015 | L | 100 | | 3.0 | | e sou | | | | | 1 | 800 | | 12 10 E |
| ecisc | Co | oler | | Y | N. | | | | | | | | | | | | | | | - 5 | SZWPLER N | 40 - 15 | 1500 | G 3/4 | 4 | | 300 | | | | | | | 14 | | 100 | | | | | | 140.1 | 4 | 1 | | | | 16 |
| empl | e Int | act | (| Yy | N | | | | | | | | | | | | | | | 1 | PRINT Name | | | 1 | P | EL | 01 | P | 14 | 1 | A | VD | 4 | li E | R | | | | | | _ | | 75 | ATE 4 | Name - | | _ | |
| ddi | tional Comments: | | | | | | | 1 | SIGNATURE | of SANF | LER | 1 | 1 | 1 | id | 1 | 1 | 6 | 10 | 1 | 1 | in. | | | | | | | | | P | ATE S | 3. | 34 | | | | | | | | | | | | | | |

Tel: 612-607-1700 Fax: 612-807-6444

Method 8290 Analysis Results

Client - Code Environmental Services

Client's Sample ID Lab Sample ID Filename Injected By

Total Amount Extracted % Moisture Dry Weight Extracted ICAL Date

CCal Filonamo(s) Method Blank ID

ASP-2 COMP 105346480 U40225B_14 SMT

12.7 g 21.1 10.0 g 10/03/2003

U40225A_23 & U40225B_23 **BLANK-4388**

Matrix Dilution Collected Received Extracted

Analyzed

NA 02/18/2004 02/19/2004 02/23/2004

Soil

02/26/2004 07:02

| Native
Isomers | Conc
ng/Kg | EMPC
ng/Kg | LRL
ng/Kg | | Internal
Standards | ng's
Added | Percent
Recovery |
|---------------------|---------------|---------------|--------------|-----|-------------------------|---------------|---------------------|
| 2,3,7,8-TCDF | 1400 | 100 | 67.0 | A | 2,3,7,8-TCDF-13C | 2.00 | 38 P |
| Total TCDF | 36000 | | 0.2 | | 2,3,7,8-TCDD-13C | 2.00 | 41 |
| | | | 20.00 | 4 | 1,2,3,7,8-PeCDF-13C | 2.00 | 36 P |
| 2,3,7,8-TCDD | 53 | - | | A | 2,3,4,7,8-PeCDF-13C | 2.00 | 37 F |
| Total TCDD | 900 | | 0.2 | | 1,2,3,7,8-PeCDD-13C | 2.00 | 38 F |
| | | | 222 | 2 | 1,2,3,4,7,8-HxCDF-13C | 2.00 | 45 |
| 1,2,3,7,8-PeCDF | 980 | - | | Α | 1,2,3,6,7,8-HxCDF-13C | 2.00 | 41 |
| 2,3,4,7,8-PeCDF | 7000 | | 29.0 | Α | 2,3,4,6,7,8-HxCDF-13C | 2.00 | 40 |
| Total PeCDF | 37000 | | 1.0 | | 1,2,3,7,8,9-HxCDF-13C | 2.00 | 37 F |
| PL 1216 210 | | 17.5 | | 7.0 | 1,2,3,4,7,8-HxCDD-13C | 2.00 | 49 |
| 1,2,3,7,8-PeCDD | - | 150 | | IA | 1,2,3,6,7,8-HxCDD-13C | 2.00 | 44 |
| Total PeCDD | 1700 | | 1.0 | | 1,2,3,4,6,7,8-HpCDF-13C | 2.00 | 42 1 |
| | | | | | 1,2,3,4,7,8,9-HpCDF-13C | 2.00 | 31 F |
| ,2,3,4,7,8-HxCDF | 4200 | | 44.0 | Α | 1,2,3,4,6,7,8-HpCDD-13C | 2.00 | 46 |
| .2.3.6.7.8-HxCDF | 1700 | | 20.0 | A | OCDD-13C | 4.00 | 40 |
| 2,3,4,6,7,8-HxCDF | 2700 | **** | 19.0 | A | | | |
| ,2,3,7,8,9-HxCDF | 550 | ***** | 8.7 | A | 1,2,3,4-TCDD-13C | 2.00 | NA |
| Total HxCDF | 25000 | | 1.0 | | 1,2,3,7,8,9-HxCDD-13C | 2.00 | NA |
| 1,2,3,4,7,8-HxCDD | 110 | - | 7.1 | A | 2.3.7.8-TCDD-37CI4 | 0.20 | 52 |
| 1,2,3,6,7,8-HxCDD | 420 | | | A | 777.17 | -1 | |
| ,2,3,7,8,9-HxCDD | | 110 | 8.4 | | | | |
| Total HxCDD | 3700 | **** | 1.0 | | | | |
| ,2,3,4,6,7,8-HpCDF | 16000 | - | 39.0 | A | Total 2,3,7,8-TCDD | | |
| 1,2,3,4,7,8,9-HpCDF | | 480 | | EA | Equivalence: 5000 ng/Kg | | |
| Total HpCDF | 18000 | | 1.0 | 7 | (Using ITE Factors) | | |
| ,2,3,4,6,7,8-HpCDD | 4900 | | 15.0 | Α | | | |
| Total HpCDD | 9300 | - | 1.0 | 5/1 | | | |
| OCDF | 12000 | **** | 8.1 | A | | | |
| OCDD | 75000 | ***** | | A | | | |

Results reported on a dry weight basis

Conc = Concentration (I ctals include 2,3,7,8-substituted isomers)
EMPC = Estimated Maximum Possible Concentration

A = Detection Limit based on signal-to-noise measurement

J = Concentration detected is below the calibration range

B = Less than 10 times higher than method blank level

P = Recovery outside of target range

Nn = Value obtained from additional analysis

LRL = Lower Reporting Limit

I = Interference

E = PCDE Interference

S = Saturated signal

ND = Not Detected

NA = Not Applicable NC = Not Calculated

= See Discussion

Report No.....1084865

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Tel: 612-607-1700 Fax: 612-607-6444

Method 8290 Blank Analysis Results

Client - Code Environmental Services

Lab Sample ID Filename Total Amount Extracted **ICAL Date**

CCal Filename(s)

BLANK-4388 U40225A_11 20.0 g 10/03/2003 U40225A_08 & U40225A_23

Matrix Dilution Extracted Analyzed

Solid NA 02/23/2004

02/25/2004 17:01

Injected By SMT

| Native
Isomers | Conc
ng/Kg | EMPC
ng/Kg | LRL
ng/Kg | Internal
Standards | ng's
Added | Percent
Recovery |
|---------------------|---------------|---------------|--------------|--------------------------|---------------|---------------------|
| 2,3,7,8-TCDF | 0.11 | | 0.100 J | 2,3,7,8-TCDF-13C | 2.00 | 56 |
| Total TCDF | 0.35 | - | 0.100 J | 2,3,7,8-TCDD-13C | 2.00 | 59 |
| | | | | 1,2,3,7,8-PeCDF-13C | 2.00 | 53 |
| 2,3,7,8-TCDD | ND | | 0.110 A | 2,3,4,7,8-PeCDF-13C | 2.00 | 53 |
| Total TCDD | ND | ***** | 0.100 | 1,2,3,7,8-PeCDD-13C | 2.00 | 55 |
| | | | | 1,2,3,4,7,8-HxCDF-13C | 2.00 | 52 |
| 1,2,3,7,8-PeCDF | ND | | 0.500 | 1,2,3,6,7,8-HxCDF-13C | 2.00 | 62 |
| 2.3,4,7,8-PeCDF | ND | | 0.500 | 2.3.4.6.7.8-HxCDF-13C | 2.00 | 59 |
| Total PeCDF | ND | | 0.500 | 1,2,3,7,8,9-HxCDF-13C | 2.00 | 54 |
| Value of the second | | | | 1,2,3,4,7,8-HxCDD-13C | 2.00 | 58 |
| 1,2,3,7,8-PeCDD | ND | | 0.500 | 1,2,3,6,7,8-HxCDD-13C | 2.00 | 68 |
| Total PeCDD | ND | ***** | 0.500 | 1,2,3,4,6,7,8-HpCDF-13C | 2.00 | 62 |
| | | | | 1,2,3,4,7,8,9-HpCDF-13C | 2.00 | 54 |
| 1,2,3,4,7,8-HxCDF | ND | ***** | 0.500 | 1,2,3,4,6,7,8-HpCDD-13C | 2.00 | 60 |
| 1,2,3,6,7,8-HxCDF | ND | **** | 0.500 | OCDD-13C | 4.00 | 51 |
| 2,3,4,6,7,8-HxCDF | ND | **** | 0.500 | | | 514 |
| 1,2,3,7,8,9-HxCDF | ND | - | 0.500 | 1,2,3,4-TCDD-13C | 2.00 | NA |
| Total HxCDF | ND | | 0.500 | 1,2,3,7,8,9-HxCDD-13C | 2.00 | NA |
| 1,2,3,4,7,8-HxCDD | ND | - | 0.500 | 2.3.7.8-TCDD-37CI4 | 0.20 | 65 |
| 1,2,3,6,7,8-HxCDD | ND | - | 0.500 | -1-1-1- | -0.00 | 1,000 |
| 1,2,3,7,8,9-HxCDD | ND | | 0.500 | | | |
| Total HxCDD | ND | **** | 0.500 | | | |
| 1,2,3,4,6,7,8-HpCDF | ND | | 0.500 | Total 2.3.7.8-TCDD | | |
| 1,2,3,4,7,8,9-HpCDF | ND | | 0.500 | Equivalence: 0.011 ng/Kg | | |
| Total HpCDF | ND | | 0.500 | (Using ITE Factors) | | |
| 1.2.3.4.6,7,8-HpCDD | ND | | 0.500 | | | |
| Total HpCDD | 0.56 | | 0.500 J | | | |
| OCDF | ND | **** | 1.000 | | | |
| OCDD | ND | | 1.000 | | | |

Conc = Concentration (Totals include 2,3,7,8-substituted isomers). EMPC = Estimated Maximum Possible Concentration

LRL = Lower Reporting Limit
J = Concentration detected is below the calibration range

P = Recovery outside of target range A = Detection Limit based on signal-to-noise measurement

i = Interference E = PCDE Interference ND = Not Detected NA = Not Applicable NC = Not Calculated

* = See Discussion

Report No.....1084865

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Tel: 612-807-1700 Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Client - Code Environmental Services

Lab Sample ID Filename

Total Amount Extracted ICAL Date

CCal Filename(s) Method Blank ID

LCS-4389 U40225A_09

20.0 g 10/03/2003

U40225A_08 & U40225A_23 BLANK-4388

Matrix

Dilution

Extracted Analyzed Injected By Solid

NA 02/23/2004 02/25/2004 15:22

SMT

| Native
Isomers | Qs
(ng) | Qm
(ng) | %
Rec. | Internal
Standards | ng's
Added | Percent
Recovery |
|---|----------------------|----------------------|----------------|---|----------------------|---------------------|
| 2,3,7,8-TCDF | 0.20 | 0.18 | 88 | 2,3,7,8-TCDF-13C
2,3,7,8-TCDD-13C
1,2,3,7,8-PeCDF-13C | 2.00
2.00
2.00 | 59
61
57 |
| 2,3,7,8-TCDD | 0.20 | 0.18 | 92 | 2,3,4,7,8-PeCDF-13C
1,2,3,7,8-PeCDD-13C
1,2,3,4,7,8-HxCDF-13C | 2.00
2.00
2.00 | 58
60
53 |
| 1,2,3,7,8-PeCDF | 1.00 | 0.91 | 91 | 1,2,3,6,7,8-HxCDF-13C | 2.00 | 65 |
| 2,3,4,7,8-PeCDF | 1.00 | 0.87 | 87 | 2,3,4,6,7,8-HxCDF-13C
1,2,3,7,8,9-HxCDF-13C | 2.00
2.00
2.00 | 63
58
57 |
| 1,2,3,7,8-PeCDD | 1.00 | 0.95 | 95 | 1,2,3,4,7,8-HxCDD-13C
1,2,3,6,7,8-HxCDD-13C
1,2,3,4,6,7,8-HpCDF-13C | 2.00 | 75
63 |
| 1,2,3,4,7,8-HxCDF | 1.00 | 0.95 | 05 | 1,2,3,4,7,8,9-HpCDF-13C | 2.00 | 57
63 |
| 1,2,3,6,7,8-HxCDF
2,3,4,6,7,8-HxCDF | 1.00 | 0.95
0.95 | 95
95
95 | 1,2,3,4,6,7,8-HpCDD-13C
OCDD-13C | 4.00 | 55 |
| 1,2,3,7,8,9-HxCDF | 1.00 | 0.93 | 93 | 1,2,3,4-TCDD-13C
1,2,3,7,8,9-HxCDD-13C | 2.00 | NA
NA |
| 1,2,3,4,7,8-HxCDD
1,2,3,6.7,8-HxCDD
1,2,3,7,8,9-HxCDD | 1.00
1.00
1.00 | 0.92
0.96
0.99 | 92
96
99 | 2,3,7,8-TCDD-37Cl4 | 0.20 | 75 |
| 1,2,3,4,6,7,8-HpCDF
1,2,3,4,7,8,9-HpCDF | 1.00
1.00 | 0.99
1.02 | 99
102 | | | |
| 1,2,3,4,6,7,8-HpCDD | 1.00 | 1.02 | 102 | | | |
| OCDF
OCDD | 2.00 | 1.84 | 92
100 | | | |

Qs = Quantity Spiked Qm = Quantity Measured

Rec. = Recovery (Expressed as Percent)

P = Recovery outside of target range X = Background subtracted value

Nn = Value obtained from additional analysis

NA = Not Applicable

* = See Discussion

Report No.....1084865

REPORT OF LABORATORY ANALYSIS

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400 Middlesex Avenue Carteret, NJ 07008

628188 June 8, 2004 ATTENTION (732) 969-2700 Fax (732) 969-2701 **Kelly Fifer** "Complete Solutions To Your Environmental Concerns" Bayonne Barrel & Drum de maximis, inc. 186 Center Street, Suite 290 Clinton, New Jersey (908) 735-0315 WE ARE SENDING YOU X Attached Under separate cover via the following items: Specifications Shop drawings Plans Samples . Prints Copy of Letter Change Order COPIES DATE NO. DESCRIPTION 2 June 7, 2004 Ash Pile 1-4 Waste Profiles. THESE ARE TRANSMITTED as checked below. For approval Approved as submitted Resubmit copies for approval X For your use Approved as noted Submit copies for distribution As requested Returned for corrections Return corrected prints For review and comment FOR BIDS DUE PRINTS RETURNED AFTER LOAN TO US 20 REMARKS:

COPY TO

File

Signed:

LETTER OF TRANSMITTAL



| | r Street, Suite 290 |)
(908) 735-93 | 115 | | | |
|-------------|--------------------------|-------------------|---|--------------|-----------------------|--------------------------------------|
| E ARE SENDI | NG YOU Shop drawin | | Prints Change Order | cover via | Samples | the following items: Specifications |
| COPIES | DATE | NO. | | l t | ESCRIPTION | |
| 1 | Various | | Copy of Analytical Data To Dat | e February 2 | 2004 thru March 18, 2 | 004 |
| HESE ARE TR | RANSMITTED as che | ecked below: | | | | |
| | For approv | | Approved as submitted | | Resubmit | copies for approval |
| | X For your us As request | | Approved as noted Returned for corrections | | Submit | copies for distribution |
| | | and comment | | | tteam | |
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| REMARKS: | | | | | | |

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LETTER OF TRANSMITTAL

DATE 03/18/04 S188

CO LESI _ABORATORIES, INC. • ENVIRONMENTAL TESTING 377 Sheffield Avenue, North Babylon, New York 11703 (631) 422-5777 • FAX (631) 422-5770 • Email: ecotestlab@aol.com

CHAIN OF CUSTODY RECUAD

| Client: C | | | | | | | vice; | IN | | | | 1 | | īΥ |)

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| | | | | NJ | | | 8 | | | | 1 | | / | 1 | W | 12 | / | / | // | / | / | /3 | . / | |
| Phone: 7 | 32- | 969-2 | 700F | AX: 7 | 32-1 | 969- | 270 | 1 | | | 6 | 1 | / | / | | 7 | / | / | 11 | //. | . / | 20 | 1.1.00 | |
| Person rec | eiving | report | Ton | 170 | 4195 | SET | *i | | | 1 | | / | ./ | (1) | NX. | / | / | 1 | /// | 13 | 0 / | e d | NESS | FAVES ON PORT |
| Sampled t | y. F | RED | AN | DLA | ien | ~ | | | | | 1 | VS | Y. | y. | 7 | / | / | / | 11 | (II Require | 100 | 8 | DITTO. | 4 × EDD |
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| | | 3188 | | | | | | | | 1 | X | Y | XX | X. | / | / | / | / | // | -/. | Dale Dumen | | | |
| 10.6 | Taken S | lena (D) | | | | | | | | Y | V | Vi | X | 1 | / | 1 | / | / | | 1 | | | | |
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Water at a | D.E. | AUNE ! | D.C. | Wal's | DEWIL | REILC | i i i i | | 1 | 1X A | A | 1 | 7 | | / | / | / | | / | / . | | | Talle (VV2) of (15) | ijes::s;;(1000)3(30) |
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| Relinquish | ed by: (A | Signatu | re) | DATE/T | IME S | EAL IN | TACT?/ | Rece | ived | by: | (Sign | patu | re) | | Rella | quis | hed ! | by: (| Signature |) 0 | ATE/TIM | E | SEAL INTACT? | Received by: (Signature) |
| Represent | d'Ada | for | | 2004 | Y.W.Y | ES N | O NA | Book | - | ind | 17 | | , | 1 | Repr | eser | itina: | | | | | | YES NO NA | Representing: |
| Relinquish | | | | DATE/T | | | | | | | | natu | re) | _ | _ | _ | | | Signature |) 0 | ATE/TIM | _ | | Received by: (Signature) |
| | | | | 1 | | | O NA | 11 | | 4.7 | | | | 1 | Z.W | | nting: | | Y. | | 1 | 1 | YES NO NA | Representing: |

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, 631 422-5777 11703

LAB NO.240597.03

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti

P0#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1350

MATRIX: Extract SAMPLE: ASP-3 Comp

ASP-3 Comp

| | | | | DATE OF | ANALYTICAL |
|---|-------|--------|-------|--|------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS LRL | METHOD |
| Carbon Tetrachloride | ug/L | < 10 | 15.57 | 02/25/04 10 | EPA8260 |
| Chlorobenzene | ug/L | < 10 | | 02/25/04 10 | EPA8260 |
| Chloroform | ug/L | < 10 | | 02/25/04 10 | EPA8260 |
| 1.4 Dichlorobenzene (v) | ug/L | < 10 | | 02/25/04 10 | EPA8260 |
| 1,2 Dichloroethane | ug/L | < 10 | | 02/25/04 10 | EPA8260 |
| 1.1 Dichloroethene | ug/L | < 10 | | 02/25/04 10 | EPA8260 |
| Methyl Ethyl Ketone | ug/L | 180 | | 02/25/04 100 | EPA8260 |
| Tetrachloroethene | UB/L | 42 | | 02/25/04 10 | EPA8260 |
| Trichloroethylene | ug/L | 35 | | 02/25/04 10 | EPA8260 |
| Vinyl Chloride | ug/L | < 10 | | 02/25/04 10 | EPA8260 |
| Jenzene | ug/L | 25 | | 02/25/04 10 | EPA8260 |
| TCLP Zero Headspace Extra | ct | | | 02/19/04 | BPA1311 |
| 그는 그리는 아이에 가장 아이를 하게 되었다는 아이에서는 이렇게 되었다면 하게 되었다. 그리는데 그리는 | | | | to the same of the | |

cc:

LRL=laboratory Reporting Limit

Increased LRL due to high concentration of non target

compounds.

DIRECTOR MONE

rn = 5307

EcoTest Laboratories 377 Sheffield Ave North Babylon, NY 631 422-5777 11703

LAB NO.240597.03

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti

P0#:

Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188

SOURCE OF SAMPLE: COLLECTED BY: DATE COL'D:02/18/04 RECEIVED:02/19/04 Client

TIME COL'D:1350

MATRIX: Extract SAMPLE: ASP-3 Comp ASP-3 Comp

TCLP

| | | | | DATE OF | ANALYTICAL. |
|---------------------------|-------|--------|--------|--------------|-------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS LE | L METHOD |
| Lindane | ug/L | < 0.5 | 1 4000 | 03/01/04 0.5 | EPA8081 |
| Endrin | ug/L | < 0.5 | | 03/01/04 0.5 | |
| Methoxychlor | ug/L | < 1 | | 03/01/04 1 | EPA8081 |
| Toxaphene | ug/L | < 10 | | 03/01/04 10 | EPA8081 |
| Chlordane | ug/L | < 2 | | 03/01/04 2 | EPA8081 |
| Heptachlor | ug/L | < 0.5 | | 03/01/04 0.5 | EPA8081 |
| Heptachlor Epoxide | ug/L | < 0.5 | | 03/01/04 0.5 | EPA8081 |
| 2.4-D | ug/L | < 1 | | 02/29/04 1 | EPA8151 |
| 2,4,5-TP | ug/L | < 0.5 | | 02/29/04 0.5 | EPA8151 |
| 2-Methylphenol (o-cresol) | ug/L | 98 | | 02/25/04 10 | EPA8270 |
| -Methylphenol (m-cresol) | ug/L | 65 | # | 02/25/04 10 | EPA8270 |
| 4-Methylphenol (p-cresol) | ug/L | 65 | # | 02/25/04 10 | EPA8270 |
| Pentachlorophenol (ms) | us/L | < 100 | - 2/5 | 02/25/04 100 | EPA8270 |
| 2.4.5-Trichlorophenol | ug/L | < 10 | | 02/25/04 10 | EPA8270 |
| 2.4.6-Trichlorophenol | ug/L | < 10 | | 02/25/04 10 | EPA8270 |
| 2,4-Dinitrotoluene | ug/L | < 10 | | 02/25/04 10 | EPA8270 |
| Hexachlorobenzene | ug/L | < 10 | | 02/25/04 10 | EPA8270 |
| Hexachlorobutadiene | ug/L | < 10 | | 02/25/04 10 | EPA8270 |
| Hexachloroethane | ug/L | < 10 | | 02/25/04 10 | BPA8270 |
| Nitrobenzene | ug/L | < 10 | | 02/25/04 10 | EPA8270 |
| Pyridine | ug/I. | < 10 | | 02/25/04 10 | EPA8270 |
| TCI.P Extraction | | | | 02/19/04 | EPA1311 |

DIRECTOR

cc:

LRL=laboratory Reporting Limit

REMARKS; #Total = 130 ug/L, unable to separate isomers.

NYSDOH ID # 10320

EcoTest Laboratories 377 Sheffield Ave North Babylon, NY 631 422-5777 Inc 11703

LAB NO. 240597.03

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti P0#:

Bayonne Barrel and Drum, #628188
Bayonne Barrel and Drum, #628188
Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1350 SOURCE OF SAMPLE: SOURCE OF SAMPLE: COLLECTED BY:

MATRIX: Extract SAMPLE: ASP-3 Comp ASP-3 Comp

TCLP

| ANALYTICAL DADAMETERS | wwwma | DECUTE OF | m | DATE OF | ANALYTIGAL |
|-----------------------|-------|-----------|------|----------------|------------|
| ANALYTICAL PARAMETERS | | RESULT | FLAG | ANALYSIS LRL | METHOD |
| Arsenic as As | mg/L | < 0.1 | | 03/01/04 D.1 | EPA6010 |
| Barium as Ba | mg/L | 2.5 | | 03/01/04 0.05 | EPA6010 |
| Cadmium as Cd | mg/L | 7.4 | | 03/01/04 0.05 | EPA6010 |
| Chromium es Cr | mg/L | < 0.05 | | 03/01/04 0.05 | EPA6010 |
| Lead as Pb | mg/L | 6.3 | | 03/01/04 0.05 | EPA6010 |
| Mercury as Hg | mg/L | < 0.001 | | 02/24/04 0.001 | EPA7470A |
| Selenium as Se | mg/L | < 0.1 | | 03/01/04 0.1 | EPA6010 |
| Silver as Ag | mg/L | < 0.05 | | 03/01/04 0.05 | EPA6010 |
| TCLP Extraction | | | | 02/19/04 | EPA1311 |
| | | | | | |

stals, QCQA

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

NYSDOH ID # 10320

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 1170 631 422-5777 11703

LAB NO.240597.03

03/04/04

Code Environmental Services, Inc.

400 Hiddlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: SOURCE OF SAMPLE: COLLECTED BY: Bayonne Barrel and Drum, #628188
Bayonne Barrel and Drum, #628188
Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D: 1350

MATRIX: Soil

SAMPLE: ASP-3 Comp ASP-3 Comp

Results reported on a dry weight basis

| And the second s | | | | DATE OF | | ANALYTICAL |
|--|-------|--------|------|----------|--------|------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD |
| Dichlordifluoromethane | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 |
| Chloromethane | ug/Kg | < 1300 | | 03/03/04 | | |
| Vinyl Chloride | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 |
| Bromomethane | ug/Kg | < 1300 | | 03/03/04 | | |
| Chloroethane | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 |
| Trichlorofluoromethane | ug/Kg | < 1300 | | 03/03/04 | | |
| 1.1 Dichloroethene | UE/KR | < 1300 | | 03/03/04 | 1282.0 | EPA8260 |
| Methylene Chloride | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 |
| t-1,2-Dichloroethene | ug/Kg | < 1300 | | 03/03/04 | | |
| 1.1 Dichloroethane | ug/Kg | < 1300 | | 03/03/04 | | |
| ,2-Dichloropropane | ug/Kg | < 1300 | | 03/03/04 | | |
| c-1,2-Dichloroethene | ug/Kg | < 1300 | | 03/03/04 | | |
| Bromochloromethane | ug/Kg | < 1300 | | 03/03/04 | | |
| Chloroform | ug/Kg | < 1300 | | 03/03/04 | | |
| 111 Trichloroethane | ug/Kg | < 1300 | | 03/03/04 | | |
| Carbon Tetrachloride | ug/Kg | < 1300 | | 03/03/04 | | |
| 1.1-Dichloropropene | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 |
| Renzene | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 |
| 1,2 Dichloroethane | ug/Kg | < 1300 | | 03/03/04 | | |
| Trichloroethylene | ug/Kg | 3200 | | 03/03/04 | 1282.0 | EPA8260 |
| 1,2 Dichloropropane | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 |
| Dibromomethane | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 |
| Bromodichloromethane | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 |
| c-1.3Dichloropropene | ug/Kg | < 1300 | | 03/03/04 | | |
| Toluene | ug/Kg | 810000 | | 03/03/04 | 12820. | EPA8260 |
| 001 | | | | | | |

LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

DIRECTOR

Page

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, NY 631 422-5777 11703

LAB NO.240597.03

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188

Bayonne Barrel and Drum. #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04 SOURCE OF SAMPLE: CULLECTED BY: Client

TIME COL'D:1350

MATRIX: Soil

SAMPLE: ASP-3 Comp ASP-3 Comp

Results reported on a dry weight basis

| The state of the s | | | | DATE OF | • | ANALYTICAL |
|--|-------|--------|--------|----------|--------|------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | | LRL | METHOD |
| t-1,3Dichloropropene | ug/Kg | < 1300 | 6 4374 | 03/03/04 | | |
| 112 Trichloroethaue | ug/Kg | < 1300 | | 03/03/04 | | |
| Tetrachloroethene | ug/Kg | 10000 | | 03/03/04 | | |
| 1,3-Dichloropropane | ug/Kg | < 1300 | | 03/03/04 | | |
| Chlorodibromomethane | ug/Kg | < 1300 | | 03/03/04 | | |
| 1,2 Dibromoethane | ug/Kg | < 1300 | | 03/03/04 | | |
| Chlorobenzene | ug/Kg | < 1300 | | 03/03/04 | | |
| Ethyl Benzene | ug/Kg | 100000 | | 03/03/04 | | |
| 1112Tetrachloroethane | ug/Kg | < 1300 | | 03/03/04 | | |
| m + p Xylene | ug/Kg | 400000 | | 03/03/04 | | |
| Xylene | ug/Kg | 97000 | | 03/03/04 | 1282.0 | |
| styrene | ug/Kg | 31000 | | 03/03/04 | | |
| Bromoform | ug/Kg | < 1300 | | 03/03/04 | | |
| Isopropylbenzene | ug/Kg | 8100 | | 03/03/04 | | |
| Bromobenzene | ug/Kg | < 1300 | | 03/03/04 | | |
| 1122Tctrach] oroethane | ug/Kg | < 1300 | | 03/03/04 | | |
| 123-Trichloropropane | ug/Kg | < 1300 | | 03/03/04 | | |
| n-Propylbenzene | ug/Kg | 17000 | | 03/03/04 | | |
| 2-Chlorotoluene | ug/Kg | < 1300 | | 03/03/04 | | |
| 135-Trimethylbenzene | ug/Kg | 37000 | | 03/03/04 | | |
| 4-Chlorotoluene | ug/Kg | < 1300 | | 03/03/04 | | |
| tert-Buty1benzene | ug/Kg | < 1300 | | 03/03/04 | | |
| 124-Trimethylbenzene | ug/Kg | 76000 | | 03/03/04 | | |
| sec-Butylbenzene | ug/Kg | 1900 | | 03/03/04 | | |
| >-Isopropyltoluene | ug/Kg | 3600 | | 03/03/04 | | |
| cc: | | | | | | |

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

of 12

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 631 422-5777 11703

LAB NO.240597.03

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum. #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1350

MATRIX: Soil SAMPLE: ASP-3 Comp

ASP-3 Comp

Results reported on a dry weight basis

DIRECTOR

| | | | | | DATE OF | | ANALYTICAL | |
|---|--|-------|---------|-----------|----------|--------|------------|--|
| | ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD | |
| | 1,3 Dichlorobenzene (v) | ug/Kg | < 1300 | O A D E A | 03/03/04 | | | |
| | 1.4 Dichlorobenzene (v) | ug/Kg | < 1300 | | 03/03/04 | | | |
| | n-Butylbenzene | ug/Kg | < 1300 | | 03/03/04 | | | |
| | 1,2 Dichlorobenzene (v) | ug/Kg | 3300 | | 03/03/04 | | | |
| | Dibromochloropropane | ug/Kg | < 1300 | | 03/03/04 | | | |
| | 124-Trichlorobenzene (v) | ug/Kg | < 1300 | | 03/03/04 | | | |
| | Hexachlorobutadiene | ng/Kg | < 1300 | | 03/03/04 | | | |
| | Naphthalene(v) | ug/Kg | 55000 | | 03/03/04 | 1282.0 | EPA8260 | |
| | 123-Trichlorobenzene | ug/Kg | < 1300 | | 03/03/04 | | | |
| - | tar. RutylMethylEther | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 | |
| | -Ethyltoluene | ug/Kg | 81000 | | 03/03/04 | 1282.0 | EPA8260 | |
| | Freon 113 | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 | |
| | 1245 Tetramethylbenz | ug/Kg | 31000 | | 03/03/04 | 1282.0 | EPA8260 | |
| | Acetone | ug/Kg | < 13000 | | 03/03/04 | 12820. | EPA8260 | |
| | Methyl Ethyl Ketone | ug/Kg | < 13000 | | 03/03/04 | 12820. | EPA8260 | |
| | Methylisobutylketone | ug/Kg | < 13000 | | 03/03/04 | 12820. | EPA8260 | |
| | Chlorodifluoromethane | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 | |
| | p Diethylbenzene | ug/Kg | < 1300 | | 03/03/04 | 1282.0 | EPA8260 | |
| | MS Library Search (Vol)
Library Search, VOC | | | | | | | |
| | % Solids | | 78 | | 02/20/04 | 0.1 | SM182540G | |

cc:

VOC QCQA

LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

Page

re = 5312

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 11703 631 422-5777

LAB NO. 240597.03

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188

RCE OF SAMPLE: Bayonne Barrel and Drum. #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D:1350

MATRIX: Soil

SAMPLE: ASP-3 Comp

ASP-3 Comp

Results reported on a dry weight basis DATE OF ANALYTICAL ANALYTICAL PARAMETERS FLAG ANALYSIS UNITS RESULT LRL METHOD N-Nitrosodimethylamine 03/02/04 3846.1 EPA8270 < 3800 ug/Kg Bis(2-chloroethyl)ether < 3800 03/02/04 3846.1 EPA8270 ug/Kg 1.3 Dichlorobenzene(sv) < 3800 03/02/04 3846.1 EPA8270 ug/Kg 1.4 Dichlorobenzene(sv) ug/Kg < 3800 03/02/04 3846.1 EPA8270 1,2 Dichlorobenzene(sv) < 3800 03/02/04 3846.1 EPA8270 ug/Kg Bis(2-chloroisopropyl)ether ug/Kg < 3800 03/02/04 3846.1 EPA8270 N-Nitrosodi-n-propylamine < 3800 03/02/04 3846.1 EPA8270 ug/Kg 03/02/04 3846.1 EPA8270 Hexachloroethane ug/Kg < 3800 Nitrobenzene ug/Kg < 3800 03/02/04 3846.1 BPA8270 Isophorone 03/02/04 3846.1 EPA8270 ug/Kg 11000 03/02/04 3846.1 EPA8270 is(2-chloroethoxy)methane < 3800 ug/Kg 03/02/04 3846.1 EPA8270 03/02/04 3846.1 EPA82/0 124-Trichlorobenzene (sv) ug/Kg 4000 Naphthalene(sv) ug/Kg 71000 Hexachlorobutadiene ug/Kg < 3800 03/02/04 3846.1 EPA8270 Hexachlorocyclopentadiene ug/Kg < 38000 03/02/04 38461. EPA8270 03/02/04 3846.1 EPA8270 03/02/04 3846.1 EPA8270 2-Chloronaphthalene ug/Kg < 3800 Dimethyl Phthalate ug/Kg 10000 Acenaphthylene 03/02/04 3846.1 EPA8270 03/02/04 3846.1 EPA8270 < 3800 ug/Kg 2.6-Dinitrotoluene < 3800 ug/Kg Acenaphthene ug/Kg < 3800 03/02/04 3846.1 EPA8270 2.4-Dinitrotoluene ug/Kg < 3800 03/02/04 3846.1 EPA8270 Diethyl Phthalate ug/Kg 8800 03/02/04 3846.1 EPA8270 Fluorene ug/Kg < 3800 03/02/04 3846.1 EPA8270 4-Chlorophenyl phenyl ether ug/Kg < 3800 03/02/04 3846.1 EPA8270

LRL=laboratory Reporting Limit

03/02/04 3846.1 EPA8270

REMARKS:

NYSDOH ID # 10320

15000

ug/Kg

Page 7 Cof 12

DIRECTOR

rn = 5313

N-Nitrosodiphenylamine

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 11703 631 422-5777

LAB NO.240597.03

03/04/04

Code Environmental Services, Inc. 400 Middlesex Avenue

Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188

RCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D:1350

MATRIX: Soil

SAMPLE: ASP-3 Comp ASP-3 Comp

Results reported on a dry weight basis

| | | | | DATE OF | | ANALYTICAL | |
|-------------------------------|-------|---------|------|----------|--------|------------|--|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD | |
| 1,2-Diphenylhydrazine | ug/Kg | < 3800 | | 03/02/04 | 3846.1 | EPA8270 | |
| 4-Bromophenyl phenyl ether | ug/Kg | < 3800 | | 03/02/04 | 3846.1 | EPA8270 | |
| Hexachlorobenzene | ug/Kg | < 3800 | | 03/02/04 | 3846.1 | EPAB270 | |
| Phenanthrene | ug/Kg | 9200 | | 03/02/04 | 3846.1 | EPA8270 | |
| Anthracene | ug/Kg | < 3800 | | 03/02/04 | 3846.1 | EPAB270 | |
| Di-n-Butyl Phthalate | ug/Kg | 140000 | | 03/02/04 | 3846.1 | EPA8270 | |
| Fluoranthene | ug/Kg | < 3800 | | 03/02/04 | 3846.1 | EPA8270 | |
| Benzidine | ug/Kg | < 38000 | | 03/02/04 | 38461. | EPA8270 | |
| Pyrene | ug/Kg | 6400 | | 03/02/04 | 3846.1 | EPA8270 | |
| Benzyl Butyl Phthalate | ug/Kg | 180000 | | 03/02/04 | 3846.1 | EPA8270 | |
| enzo(a)anthracene | ug/Kg | < 3800 | | 03/02/04 | 3846.1 | EPA8270 | |
| 3.3'-Dichlorobenzidine | ug/Kg | < 38000 | * | 03/02/04 | 38461. | EPA8270 | |
| Chrysene | ug/Kg | < 3800 | | 03/02/04 | 3846.1 | EPA82/0 | |
| Bis(2-ethylhexyl)phthalate | ug/Kg | 590000 | | 03/06/04 | 38461. | EPA8270 | |
| Di-n-octyl Phthalate | ug/Kg | 15000 | * | 03/02/04 | 3846.1 | EPA8270 | |
| Benzo(b)fluoranthene | ug/Kg | < 3800 | * | 03/02/04 | 3846.1 | EPA8270 | |
| Benzo(k)fluoranthene | ug/Kg | < 3800 | * | 03/02/04 | 3846.1 | EPA8270 | |
| Benzo(a)pyrene | ug/Kg | < 3800 | * | 03/02/04 | 3846.1 | EPA8270 | |
| Indeno(1,2,3-cd)pyrene | ug/Kg | < 3800 | * | 03/02/04 | 3846.1 | EPA8270 | |
| Dibenzo(a,h)anthracene | ug/Kg | < 3800 | * | 03/02/04 | 3846.1 | EPA8270 | |
| Benzo(ghi)perylene | ug/Kg | < 3800 | * | 03/02/04 | | | |
| POLICIA SCOTT MARCHINE COLLON | 1 | | | A Compa | | | |

Base Neutrals QAQC MS Library Search (BN)

cc:

LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

*Estimated due to low internal standard. *38%. Low recovery

DIRECTOR

due to interference. QC limit is 50%.

Page /8 /of 12

NYSDOH ID # 10320

EcoTest Laboratories 377 Sheffield Ave North Babylon, 631 422-5777 11703

LAB NO.240597.03

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti

PO#:

Bayonne Barrel and Drum, #628188
Bayonne Barrel and Drum, #628188
Client DATE COL'D:02/18/04 RECEIVED:02/19/04 SOURCE OF SAMPLE:

SOURCE OF SAMPLE:

COLLECTED BY; TIME COL'D:1350

MATRIX: Soil

SAMPLE: ASP-3 Comp ASP-3 Comp

Results reported on a dry weight basis

DATE OF ANALYTICAL ANALYTICAL PARAMETERS UNITS RESULT METHOD FLAG ANALYSIS LRL 03/02/04 3846.1 EPA8270 03/02/04 3846.1 EPA8270 03/02/04 3846.1 EPA8270 Phenol ug/Kg 19000 2-Chlorophenol < 3800 ug/Kg ug/Kg 2-Nitrophenol < 3800 03/02/04 3846.1 EPA8270 03/02/04 3846.1 EPA8270 ug/Kg ug/Kg 3800 2.4-Dimethylphenol < < 3800 2,4-Dichlorophenol 03/02/04 3846.1 EPA8270 03/02/04 3846.1 EPA8270 03/02/04 38461. EPA8270 4-Chloro-3-methylphenol < 3800 ug/Kg 3800 38000 2,4,5-Trichlorophenol < ug/Kg 4-Nitrophenol < ug/Kg 2,4-Dinitrophenol ug/Kg < 38000 2-Methy1-4.6-dinitrophenol ug/Kg < 38000 entachlorophenol (ms) < 38000 ug/Kg

MS Library Search (AE)

Acid Ex. QAQC

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LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

DIRECTOR

NYSDOH ID # 10320

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, NY 631 422-5777 11703

LAB NO.240597.03

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1350

ASP-3 Comp

Results reported on a dry weight basis

| and the second second second second second | | | enteressant union ca | DATE OF | | ANALYTICAL | |
|--|-------|--------|----------------------|------------|--------|------------------------|--|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD | |
| Antimony as Sb | mg/Kg | 140 | | 03/01/04 | | Control of the Control | |
| Arsenic as As | mg/Kg | < 3.2 | | 03/01/04 | | | |
| Beryllium as Be | mg/Kg | < 0.64 | | 03/01/04 | | | |
| Cadmium as Cd | mg/Kg | 150 | | 03/01/04 | | | |
| Chromium as Cr | mg/Kg | 1400 | | 03/01/04 | 7.00 | | |
| Copper as Cu | mg/Kg | 2700 | | 03/01/04 | | | |
| Lead as Pb | mg/Kg | 8700 | | 03/01/04 | | | |
| Mercury as Hg | mg/Kg | 6.0 | | 02/24/04 | 0.2564 | EPA7470A | |
| Nickel as Ni | mg/Kg | 120 | | 03/01/04 | | | |
| Selenium as Se | mg/Kg | < 5.1 | | 03/02/04 | | | |
| lilver as Ag | mg/Kg | 5.4 | | 03/03/04 | 0.7179 | EPA7760A | |
| Challium as T1 | mg/Kg | < 6.4 | | 03/01/04 | | | |
| Zinc as Zn | mg/Kg | 2400 | | 03/01/04 | | | |
| Metals, OCOA | | | | 2-12-12-12 | | | |

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LRL=laboratory Reporting Limit

REMARKS:

Page 10

DIRECTOR

rn = 5316

EcoTest Laboratories 377 Sheffield Ave North Babylon, NY 631 422-5777 11703

LAB NO.240597.03

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

P0#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1350

MATRIX: Soil

SAMPLE: ASP-3 Comp

ASP-3 Comp

Results reported on a dry weight basis

| | | | | DATE OF | | ANALYTICAL |
|-----------------------|-------|--------|------|----------|--------|------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD |
| Lindane | ug/Kg | < 64 | | 03/02/04 | 64.102 | EPA8081 |
| Heptachlor | ug/Kg | < 64 | | 03/02/04 | 64,102 | EPA8081 |
| Aldrin | ug/Kg | < 64 | | 03/02/04 | | |
| Heptachlor Epoxide | ug/Kg | < 64 | | 03/02/04 | | |
| p,p-DDE | ug/Kg | 1100 | | 03/02/04 | 64.102 | EPA8081 |
| Dieldrin | ug/Kg | < 64 | | 03/03/04 | | |
| Endrin | ug/Kg | < 64 | | 03/03/04 | 64.102 | EPA8081 |
| p,p-DDD | ug/Kg | < 64 | | 03/02/04 | 64.102 | EPA8081 |
| p.p-DDT | ug/Kg | < 130 | | 03/02/04 | 128.20 | EPA8081 |
| Chlordane | ug/Kg | < 260 | | 03/02/04 | 256.41 | EPA8081 |
| oxaphene | ug/Kg | < 1300 | | 03/02/04 | 1282.0 | EPA8081 |
| andrin Aldehyde | ug/Kg | < 380 | | 03/03/04 | 384.61 | EPA8081 |
| a BHC | ug/Kg | < 64 | | 03/02/04 | | |
| ь внс | ug/Kg | < 64 | | 03/02/04 | 64.102 | EPA8081 |
| d BHC | ug/Kg | < 64 | | 03/02/04 | 64.102 | EPA8081 |
| Endosulfan 1 | ug/Kg | < 130 | | 03/02/04 | 128.20 | EPA8081 |
| | | | | | | |

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LRL=laboratory Reporting Limit

REMARKS:

of 12 Page 11

DIRECTOR

NYSDOH ID # 10320

EcoTest Laboratories 377 Sheffield Ave North Babylon, NY 631 422-5777 Inc 11703

LAB NO.240597.03

03/04/04

Code Environmental Services, Inc. 400 Middlesex Avenue

Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188

COLLECTED BY:

Bayonne Barrel and Drum, #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04 TIME COL'D:1350

MATRIX: Soil SAMPLE: ASP-3 Comp ASP-3 Comp

Results reported on a dry weight basis

| | | | | | DATE OF | | ANALYTICAL | |
|---|--------------------------------------|-------|--|-------|----------|--------|------------|--|
| | ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD | |
| | Endosulfan 2 | ug/Kg | | 10000 | 03/04/04 | | | |
| | Endosulfan Sulfate
Pest QAQC | ug/Kg | | | 03/04/04 | | | |
| | Aroclor 1016 | ug/Kg | < 1300 | | 03/02/04 | 1282.0 | EPA8082 | |
| | Aroclor 1221 | ug/Kg | < 1300 | | 03/02/04 | 1282.0 | EPA8082 | |
| | Aroclor 1232 | ug/Kg | The latest terms and the latest terms are the lates | | 03/02/04 | | | |
| | Aroclor 1242 | ug/Kg | | | 03/02/04 | | | |
| | Arocler 1248 | ug/Kg | | | 03/03/04 | | | |
| | Aroclor 1254 | ug/Kg | | | 03/02/04 | | | |
| 7 | Aroclor 1260
est QAOC | ug/Kg | < 1300 | | 03/02/04 | | | |
| | dyanide as CN | mg/Kg | 12 | | 02/25/04 | 2.5641 | EPA335.3 | |
| | Phenols as Phenol | mg/Kg | 72 | | | | EPA420.1 | |
| | Reactive cyanide | mg/Kg | | | | | EPA335.4 | |
| | Sulfide as S | mg/Kg | | | | | EPA376.2 | |
| | pH (lab) units | | 6.8 | | 02/20/04 | | EPA9045C | |
| | Flash Point deg C
Quality Control | | > 100 | | 02/23/04 | | EPA1010 | |
| | | | | | | | | |

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LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

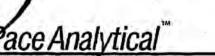
DIRECTOR

Page 12

rp = 5318

CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately

| 5 | | | | | 5,7+75 | | | | | | | | | | | | | | | | Page: | 1 | 0 | | / | | | | 1 | | | | | | | | | | | | | | |
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| Requ | | | | | | | | | | | | | | | | | | ectio | | | Client info | ma | tion (| Chec | k que | te/c | ontre | ect): | l i | | o Be | | - | - | | _ | | | ction | C | _ | _ | _ |
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TS | | MATRIX | DATECO | | TIME CO | Contain | Uhprosan | HZSON | HCI HCI | HORK | Na25200 | Methanol | 8780 | (person | | | | | | | | F | EMA | RKS | Lab | D | |
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| Serve. | 30 | | | | Tite | D. | | | | | - | 1 | - | | (OA | 0.0 | 001 | PRS | ITEM# | - | 7 | u, | INC | | | 200 | | | II() A | | | 2-1- | | | 17 | | 10 | 1-15- | 5000 | _ | | 64 | - |
| 3 | 4 | | P | | | \perp | _ | _ | 3 | _ | | 13 | - | 4 | | 1 | | | | + | The | 1 | 1.1 | 4 | 644 | 1 | and | 1 | - | - | - | 1/2 | 17 | 3 | - | لمنك | 153 | 4) | 76. | - 17 | 11 May | () | - " |
| SAM | PLE | CC | ONE | _ | 75.7 | | | - | | OTE | | | | | | | 1 | | | - | | _ | | _ | | - | _ | _ | | _ | - | - | + | - | 1 | - | 1 | | - | + | | | - |
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| Seeled | Cod | oler | -× | - | N/ | | | | | | | | | | | | | | | | of SAMPLE | 3 | | -20 | - 10 m | 0.7 | - | - | | | - | - | | ناسه | 170 | of state | - 10 ° | die . | | erio di | 1 | | 100 |
| Sample | inte | act | | Ŷ | N | | | | | | | | | | | | | | | | of SANPLE | | MP | EN | E | Ci. | 1 | A | ND | LA | in | - | _ | _ | _ | _ | - | Ip | ATE SI | med: | 7-9 | | 4 |
| Addi | ion | al C | om | me | nts | | | | | | | | | | | | | | GIGHAIL | ,AL | OF ENTITY PLE | 2 | 11 | ne | di | 4% | 6 | 1. | 1 | 13 | wire | 2 | | | | _ | _ | 1 | TE S | 7-01 | 4 | | |



Tel: 612-607-1700 Fax: 612-607-6444

Method 8290 Blank Analysis Results

Client - Code Environmental Services

Lab Sample ID Filename Total Amount Extracted ICAL Date CCal Filename(s)

BLANK-4388 U40225A_11 20.0 g 10/03/2003 U40225A_08 & U40225A_23

Matrix Dilution Extracted Analyzed Injected By Solid NA 02/23/2004

02/25/2004 17:01 SMT

| Native
Isomers | Cone
ng/Kg | EMPC
ng/Kg | LRL
ng/Kg | Internal
Standards | ng's
Added | Percent
Recovery |
|---------------------|---------------|---------------|--------------|--------------------------|---------------|---------------------|
| 2,3,7,8-TCDF | 0.11 | | 0.100 J | 2,3,7,8-TCDF-13C | 2.00 | 56 |
| Total TCDF | 0.35 | seres. | 0.100 J | 2.3.7.8-TCDD-13C | 2.00 | 59
53
53 |
| | | | | 1,2,3,7,8-PeCDF-13C | 2.00 | 53 |
| 2,3,7,8-TCDD | ND | - | 0.110 A | 2.3.4.7.8-PeCDF-13C | 2.00 | 53 |
| Total TCDD | ND | | 0.100 | 1,2,3,7,8-PeCDD-13C | 2.00 | 55 |
| 1 does drugg | 12.0 | | | 1.2.3.4.7.8-HxCDF-13C | 2.00 | 52
62 |
| 1,2,3,7,8-PeCDF | ND | - | 0.500 | 1.2.3.6.7.8-HxCDF-13C | 2.00 | 62 |
| 2,3,4,7,8-PeCDF | ND | | 0.500 | 2,3,4,6,7,8-HxCDF-13C | 2.00 | 59 |
| Total PeCDF | ND | | 0.500 | 1,2,3,7,8,9-HxCDF-13C | 2.00 | 54 |
| . U/o = and and | | | | 1,2,3,4,7,8-HxCDD-13C | 2.00 | 58 |
| 1,2,3,7,8-PeCDD | ND | **** | 0.500 | 1,2,3,6,7,8-HxCDD-13C | 2.00 | 68 |
| Total PeCDD | ND | **** | 0.500 | 1,2,3,4,6,7,8-HpCDF-13C | 2.00 | 62 |
| | | | | 1,2,3,4,7,8,9-HpCDF-13C | 2.00 | 54 |
| 1,2,3,4,7,8-HxCDF | ND | ***** | 0.500 | 1,2,3,4,6,7,8-HpCDD-13C | 2.00 | 60 |
| 1,2,3,6,7,8-HxCDF | ND | - | 0.500 | OCDD-13C | 4.00 | 51 |
| 2,3,4,6,7,8-HxCDF | ND | - | 0.500 | | | |
| 1,2,3,7,8,9-HxCDF | ND | ***** | 0.500 | 1,2,3,4-TCDD-13C | 2.00 | NA |
| Total HxCDF | ND | | 0.500 | 1,2,3,7,8,9-HxCDD-13C | 2.00 | NA |
| 1,2,3,4,7,8-HxCDD | ND | - | 0.500 | 2,3,7,8-TCDD-37Cl4 | 0.20 | 65 |
| 1,2,3,6,7,8-HxCDD | ND | - | 0.500 | Activity Comments of the | 20.000 | |
| 1,2,3,7,8,9-HxCDD | ND | - | 0.500 | | | |
| Total HxCDD | ND | ***** | 0.500 | | | |
| 1,2,3,4,6,7,8-HpCDF | ND | | 0.500 | Total 2,3,7,8-TCDD | | |
| 1,2,3,4,7,8,9-HpCDF | ND | | 0.500 | Equivalence: 0.011 ng/Kg | | |
| Total HpCDF | ND | **** | 0.500 | (Using ITE Factors) | | |
| 1.2,3,4,6,7,8-HpCDD | ND | | 0.500 | | | |
| Total HpCDD | 0.56 | | 0.500 J | | | |

1.000

1.000

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

ND

ND

OCDF

LRL = Lower Reporting Limit
J = Concentration detected is below the calibration range

P = Recovery outside of larget range A = Detection Limit based on signal-to-noise measurement

I = Interference

E = PCDE Interference

ND = Not Detected

NA = Not Applicable NC = Not Calculated

= See Discussion

Report No..... 1084865

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700 Fax: 612-607-6444

Percent

Method 8290 Laboratory Control Spike Results

Client - Code Environmental Services

Lab Sample ID Filename **Total Amount Extracted** ICAL Date CCal Filename(s) Method Blank ID

LCS-4389 U40225A_09 20.0 g 10/03/2003 U40225A_08 & U40225A_23

BLANK-4388

Matrix Dilution Extracted Analyzed Injected By

Internal

Solid NA. 02/23/2004

02/25/2004 15:22 SMT

ng's

| Native
somers | Qs
(ng) | Qm
(ng) | %
Rec. | |
|------------------|------------|------------|-----------|--|
| 2,3,7,8-TCDF | 0.20 | 0.18 | 88 | |
| 2,3,7,8-TCDD | 0.20 | 0.18 | 92 | |
| and the second | | | | |

| (ng) | (ng) | Rec. | Standards | Added | Recovery |
|----------------------|--|--|--|----------------------|----------------------|
| 0.20 | 0.18 | 88 | 2,3,7,8-TCDF-13C
2,3,7,8-TCDD-13C | 2.00 | 59
61 |
| 0.20 | 0.18 | 92 | 2,3,4,7,8-PeCDF-13C
1,2,3,7,8-PeCDD-13C | 2.00 | 57
58
60 |
| 1.00
1.00 | 0.91
0.87 | 91
87 | 1,2,3,6,7,8-HxCDF-13C
2,3,4,6,7,8-HxCDF-13C
1,2,3,7,8,9-HxCDF-13C | 2.00
2.00
2.00 | 53
65
63
58 |
| 1.00 | 0.95 | 95 | 1,2,3,6,7,8-HxCDD-13C
1,2,3,4,6,7,8-HpCDF-13C | 2.00 | 57
75
63
57 |
| 1.00
1.00
1.00 | 0.95
0.95
0.95 | 95
95
95 | 1,2,3,4,6,7,8-HpCDD-13C
OCDD-13C | 2.00
4.00 | 63
55 |
| 1.00 | 0.93 | 93 | 1,2,3,4-TCDD-13C
1,2,3,7,8,9-HxCDD-13C | 2.00 | NA
NA |
| 1.00
1.00
1.00 | 0.92
0.96
0.99 | 92
96
99 | 2,3,7,8-TCDD-37Cl4 | 0.20 | 75 |
| 1.00
1.00 | 0.99
1.02 | 99
102 | | | |
| 1.00 | 1.02 | 102 | | | |
| 2.00 | 1.84
2.01 | 92
100 | | | |
| | 0.20
1.00
1.00
1.00
1.00
1.00
1.00
1.00
1.00
1.00
1.00
1.00
1.00 | 0.20 0.18 0.20 0.18 1.00 0.91 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.92 1.00 0.96 1.00 0.99 1.00 0.99 1.00 0.99 1.00 1.02 1.00 1.02 | 0.20 0.18 88 0.20 0.18 92 1.00 0.91 91 1.00 0.87 87 1.00 0.95 95 1.00 0.95 95 1.00 0.95 95 1.00 0.95 95 1.00 0.93 93 1.00 0.92 92 1.00 0.96 96 1.00 0.99 99 1.00 0.99 99 1.00 1.02 102 1.00 1.02 102 | 0.20 | 0.20 |

Qs = Quantity Spiked Qm = Quantity Measured

Rec. = Recovery (Expressed as Percent) P = Recovery outside of target range X = Background subtracted value

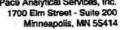
Nn = Value obtained from additional analysis

NA = Not Applicable
* = See Discussion

Report No.....1084865

REPORT OF LABORATORY ANALYSIS

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Tol: 612-607-1700 Fax: 612-607-6444

ace Analytical

Method 8290 Analysis Results

Client - Code Environmental Services

Client's Sample ID Lab Sample ID Filename Injected By **Total Amount Extracted** ASP-3 COMP 105346498 U40225B_16 SMT 13.5 g

% Moisture Dry Weight Extracted ICAL Date CCal Filename(s) Method Blank ID

25.5 10.1 g 10/03/2003 U40225A_23 & U40225B_23 BLANK-4388

Matrix Dilution Collected Received Extracted

5 02/18/2004 02/19/2004 02/23/2004

Soil

02/26/2004 08:41 Analyzed

| MOGROO DIGGIN ID | | 1111 1000 | | | raidiyeee eeee | | |
|---------------------|---------------|---------------|--------------|-----|--|---------------|---------------------|
| Native
Isomers | Conc
ng/Kg | EMPC
ng/Kg | LRL
ng/Kg | | Internal
Standards | ng's
Added | Percent
Recovery |
| 2,3,7,8-TCDF | - | 21000 | 140.0 | EA | 2,3,7,8-TCDF-13C | 2.00 | 19 IP |
| Total TCDF | 530000 | 2.000 | 0.9 | - | 2,3,7,8-TCDD-13C | 2.00 | 17 P |
| 101011001 | 000000 | -600 | 4.5 | | 1,2,3,7,8-PeCDF-13C | 2.00 | 18 P |
| 2,3,7,8-TCDD | 60 | 444 | 8.1 | A | 2,3,4,7,8-PeCDF-13C | 2.00 | 22 IP |
| Total TCDD | 870 | - | 0.9 | | 1,2,3,7,8-PeCDD-13C | 2.00 | 17 P |
| TOTAL TODD | 670 | | 0.5 | | 1,2,3,4,7,8-HxCDF-13C | 2.00 | 83 1 |
| 1,2,3,7,8-PeCDF | 9900 | - | 85.0 | A | 1,2,3,6,7,8-HxCDF-13C | 2.00 | 65 |
| 2,3,4,7,8-PeCDF | 27000 | - | 43.0 | Â | 1,2,3,0,7,0-11XUDF-13U | 2.00 | 68 |
| | | | | ~ | 2,3,4,6,7,8-HxCDF-13C | | 66 |
| Total PeCDF | 210000 | | 5.0 | | 1,2,3,7,8,9-HxCDF-13C | 2.00 | 84 |
| 4 0 0 7 B B-ODB | 400 | | | 020 | 1,2,3,4,7,8-HxCDD-13C | 2.00 | |
| 1,2,3,7,8-PeCDD | 130 | **** | 5.3 | A | 1,2,3,6,7,8-HxCDD-13C | 2.00 | 70 |
| Total PeCDD | 660 | | 5.0 | | 1,2,3,4,6,7,8-HpCDF-13C | 2.00 | 76 1 |
| 100.00.000 | 200420 | | 22.0 | | 1,2,3,4,7,8,9-HpCDF-13C | 2.00 | 61 |
| 1,2,3,4,7,8-HxCDF | 30000 | - | 22.0 | A | 1,2,3,4,6,7,8-HpCDD-13C | 2.00 | 75 |
| 1,2,3,6,7,8-HxCDF | 5900 | | 26.0 | A | OCDD-13C | 4.00 | 77 |
| 2,3,4,6,7,8-HxCDF | 7800 | - | 54.0 | A | | 30.3 | 0.0 |
| 1,2,3,7,8,9-HxCDF | 2100 | **** | 17.0 | A | 1,2,3,4-TCDD-13C | 2.00 | NA |
| Total HxCDF | 110000 | | 5.0 | | 1,2,3,7,8,9-HxCDD-13C | 2.00 | NA |
| 1,2,3,4,7,8-HxCDD | 170 | | 9.6 | A | 2,3,7,8-TCDD-37Cl4 | 0.20 | 20 |
| 1,2,3,6,7,8-HxCDD | 440 | | 11.0 | A | CATALOT STATES AND | | |
| 1,2,3,7,8,9-HxCDD | 190 | ***** | 9.0 | | | | |
| Total HxCDD | 3800 | Ξ | 5.0 | 100 | | | |
| 1,2,3,4,6,7,8-HpCDF | 25000 | | 14.0 | A | Total 2,3,7,8-TCDD | | |
| 1,2,3,4,7,8,9-HpCDF | 960 | **** | 20.0 | | Equivalence: 19000 ng/Kg | | |
| Total HpCDF | 31000 | - | 5.0 | 47 | (Using ITE Factors) | | |
| 1,2,3,4,6,7,8-HpCDD | 5100 | - | 15.0 | A | | | |
| Total HpCDD | 9700 | | 5.0 | 1 | | | |
| OCDF | 12000 | ***** | 10.0 | A | | | |
| OCDD | 56000 | | 29.0 | | | | |

Results reported on a dry weight basis Conc = Concentration (Totals Include 2,3,7,8-substituted isomers) EMPC = Estimated Maximum Possible Concentration A = Detection Limit based on signal-to-noise measurement

J = Concentration detected is below the calibration range B = Less than 10 times higher than method blank level

P = Recovery outside of target range

Nn = Value obtained from additional analysis

LRL = Lower Reporting Limit

I = Interference

E = PCDE Interference

S = Saturated signal

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

Report No.....1084865

REPORT OF LABORATORY ANALYSIS

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400 Middlesex Avenue Carteret, NJ 07008

June 8, 2004 ATTENTION (732) 969-2700 Fax (732) 969-2701 Kelly Fifer "Complete Solutions To Your Environmental Concerns" Bayonne Barrel & Drum de maximis, inc. 186 Center Street, Suite 290 Clinton, New Jersey (908) 735-0315 WE ARE SENDING YOU X Attached Under separate cover via the following items: Shop drawings Prints Specifications Plans Samples Copy of Letter Change Order COPIES DATE NO. DESCRIPTION 2 June 7, 2004 Ash Pile 1-4 Waste Profiles. THESE ARE TRANSMITTED as checked below: For approval Approved as submitted copies for approval Resubmit X For your use Approved as noted Submit copies for distribution As requested Returned for corrections Return corrected prints For review and comment FOR BIDS DUE PRINTS RETURNED AFTER LOAN TO US REMARKS:

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ECO ESI _ABORATORIES, INC. • ENVIRONMENTAL TESTING 377 Sheffield Avenue, North Babylon, New York 11703 (631) 422-5777 • FAX (631) 422-5770 • Email: ecotestlab@aol.com

CHAIN OF CUSTODY RECUAD

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Represent | del | Gur | v.sv | DATE/T
2.181 | IME S | SEAL IN | ITACT? | Rece | red | by: | (Sign | Attu | re) | 1 | Repr | | | oy: (6 | Signature | . DA | ATE/TIME | | Received by: (Signature) Representing: |
| Relinquish | | | re) | DATE/T | IME S | SEAL IN | TACT? | Rece | ived | by: | (Sign | atur | e) | | | | | y: (8 | Signature) | D/ | TE/TIME | | Received by: (Signature) |
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EcoTest Laboratories 377 Sheffield Ave Ino North Babylon, NY 631 422-5777 11703

LAB NO. 240597.04

03/04/04

Code Environmental Services, Inc. 400 Middlesex Avenue

Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum. #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum. #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1420

MATRIX: Extract SAMPLE: ASP-4 Comp

ASP-4 Comp

TCLP

| | | | | DATE OF | | ANALYTICAL |
|---------------------------|-------|--------|------|----------|-----|------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD |
| Carbon Tetrachloride | ug/L | < 10 | | 02/25/04 | 10 | EPA8260 |
| Chlorobenzene | ug/L | < 10 | | 02/25/04 | | EPA8260 |
| Chloroform | ug/L | < 10 | | 02/25/04 | | EPA8260 |
| 1,4 Dichlorobenzene (v) | ug/L | < 10 | | 02/25/04 | | EPA8260 |
| 1,2 Dichloroethane | ug/L | < 10 | | 02/25/04 | 10 | EPA8260 |
| 1.1 Dichloroethene | ug/L | < 10 | | 02/25/04 | 10 | BPA8260 |
| Methyl Ethyl Ketone | ug/L | 130 | | 02/25/04 | | EPA8260 |
| Tetrachloroethene | ug/L | 59 | | 02/25/04 | 10 | EPA8260 |
| Trichloroethylene | ug/L | 74 | | 02/25/04 | | EPA8260 |
| Vinyl Chloride | ug/L | 12 | | 02/25/04 | | EPA8260 |
| enzene | ug/L | 26 | | 02/25/04 | 10 | EPA8260 |
| TCLP Zero Headspace Extra | ct | | | 02/19/04 | | EPA1311 |
| | | | | | | |

cc:

LRL=laboratory Reporting Limit

REMARKS: Increased LRL due to high concentration of non target compounds.

DIRECTOR

Page

rn = 5319

EcoTest Laboratories 377 Sheffield Ave North Babylon, NY 631 422-5777

LAB NO. 240597.04

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1420

MATRIX: Extract SAMPLE: ASP-4 Comp

ASP-4 Comp

TCLP

| | IGLP | | | | | |
|---------------------------|-------|--------|------|------------|------------|----|
| Hatamadain one Hanner | | | | DATE OF | ANALYTIC | AL |
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS I | LRL METHOD | |
| Lindane | ug/L | < 0.5 | | 03/01/04 0 | .5 EPA8081 | |
| Endrin | ug/L | < 0.5 | | 03/01/04 0 | .5 EPA8081 | |
| Methoxychlor | ug/L | < 1 | | 03/01/04 1 | EPA8081 | |
| Toxaphene | ug/L | < 10 | | 03/01/04 1 | D EPA8081 | |
| Chlordane | ug/L | < 2 | | 03/01/04 2 | EPA8081 | |
| Heptachlor | ug/L | < 0.5 | | 03/01/04 0 | .S EPA8081 | |
| Heptachlor Epoxide | ug/L | < 0.5 | | 03/01/04 0 | | |
| 2,4-D | ug/L | < 1 | | 02/29/04 1 | EPA8151 | |
| 2,4,5-TP | ug/L | 3.9 | | 02/29/04 0 | | |
| 2-Methylphenol (o-cresol) | ug/L | 130 | | 02/25/04 1 | | |
| -Methylphenol (m-cresol) | ug/L | 85 | # | 02/25/04 1 | | |
| -Methylphenol (p-cresol) | ug/L | 85 | # | 02/25/04 1 | | |
| Pentachlorophenol (ms) | ug/L | < 100 | | 02/25/04 1 | 00 EPA8270 | |
| 2.4.5-Trichlorophenol | ug/L | < 10 | | 02/25/04 1 | O EPA8270 | |
| 2,4,6-Trichlorophenol | ug/L | < 10 | | 02/25/04 1 | | |
| 2,4-Dinitrotolucne | ug/L | < 10 | | 02/25/04 1 | | |
| dexachlorobenzene | ug/L | < 10 | | 02/25/04 1 | O EPA8270 | |
| Hexachlorobutadiene | ug/L | < 10 | | 02/25/04 1 | 0 EPA8270 | |
| Jexachloroethane | ug/L | < 10 | | 02/25/04 1 | O EPA8270 | |
| Vitrobenzene | ug/L | < 10 | | 02/25/04 1 | | |
| Pyridine | ug/L | < 10 | | 02/25/04 1 | O EPA8270 | |
| TCIP Extraction | | | | 03/10/04 | PDA1311 | |

CLP Extraction

02/19/04

EPA1311

CC:

LRL=laboratory Reporting Limit

REMARKS: #Total = 170 ug/L, unable to separate isomers.

DIRECTOR

6f 12

rn = 5320

EcoTest Laboratories 377 Sheffield Ave North Babylon, NY 631 422-5777 Inc 11703

LAB NO.240597.04

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE:

Bayonne Barrel and Drum. #628188

COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D:1420

MATRIX: Extract SAMPLE: ASP-4 Comp

ASP-4 Comp

TCLP

| | | | | DATE OF | ANALYTICAL |
|-----------------------|-------|---------|------|----------------|------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS LRL | METHOD |
| Arsenic as As | mg/L | < 0.1 | | 03/01/04 0.1 | EPA6010 |
| Barium as Ba | mg/L | 2.8 | | 03/01/04 0.05 | EPA6010 |
| Cadmium as Cd | mg/L | 0.56 | | 03/01/04 0.05 | EPA6010 |
| Chromium as Cr | mg/L | < 0.05 | | 03/01/04 0.05 | EPA6010 |
| Lead as Pb | mg/L | 10 | | 03/01/04 0.05 | EPA6010 |
| Mercury as Hg | mg/L | < 0.001 | | 02/24/04 0.001 | EPA7470A |
| Selenium as Se | mg/1. | < 0.1 | | 03/01/04 0.1 | EPA6010 |
| Silver as Ag | mg/1. | < 0.05 | | 03/01/04 0.05 | EPA6010 |
| TCLP Extraction | 2 | | | 02/19/04 | EPA1311 |
| | | | | | |

etals, QCQA

cc:

LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

Page

DIRECTOR

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, NY 631 422-5777 11703

LAB NO.240597.04

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti ATTN:

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE:

Bayonne Barrel and Drum, #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04 COLLECTED BY: Client

TIME COL'D:1420

MATRIX: Soil

SAMPLE: ASP-4 Comp ASP-4 Comp

Results reported on a dry weight basis

| | | | With Table | DATE OF | | ANALYTICAL |
|------------------------|-------|--------|------------|----------|--------|------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD |
| Dichlordifluoromethane | ug/Kg | < 1200 | | 03/03/04 | 1234.5 | EPA8260 |
| Chloromethane | ug/Kg | < 1200 | | 03/03/04 | | |
| Vinyl Chloride | ug/Kg | < 1200 | | 03/03/04 | | |
| Bromomethane | ug/Kg | < 1200 | | 03/03/04 | | |
| Chloroethane | ug/Kg | < 1200 | | 03/03/04 | | |
| Trichlorofluoromethane | ug/Kg | < 1200 | | 03/03/04 | | |
| 1.1 Dichloroethene | ug/Kg | < 1200 | | 03/03/04 | | |
| Methylene Chloride | ug/Kg | < 1200 | | 03/03/04 | 1234.5 | EPA8260 |
| t-1,2-Dichloroethene | ug/Kg | < 1200 | | 03/03/04 | | |
| 1.1 Dichloroethane | ug/Kg | < 1200 | | 03/03/04 | 1234.5 | EPA8260 |
| -, 2-Dichloropropane | ug/Kg | < 1200 | | 03/03/04 | 1234.5 | EPA8260 |
| -1,2-Dichloroethene | ug/Kg | < 1200 | | 03/03/04 | 1234.5 | EPA8260 |
| Bromochloromethane | ug/Kg | < 1200 | | 03/03/04 | | |
| Chloroform | ug/Kg | < 1200 | | 03/03/04 | 1234.5 | EPA8260 |
| 111 Trichloroethane | ug/Kg | < 1200 | | 03/03/04 | 1234.5 | EPA8260 |
| Carbon Tetrachloride | ug/Kg | < 1200 | | 03/03/04 | | |
| 1.1-Dichloropropene | ug/Kg | < 1200 | | 03/03/04 | 1234,5 | EPA8260 |
| Benzene | ug/Kg | < 1200 | | 03/03/04 | | |
| 1,2 Dichloroethane | ug/Kg | < 1200 | | 03/03/04 | 1234.5 | EPA8260 |
| Frichloroethylene | ug/Kg | 5900 | | 03/03/04 | 1234.5 | EPA8260 |
| 1,2 Dichloropropane | ug/Kg | < 1200 | | 03/03/04 | 1234.5 | EPA8260 |
| Dibromomethane | ug/Kg | < 1200 | | 03/03/04 | 1234.5 | EPA8260 |
| Bromodichloromethane | ug/Kg | < 1200 | | 03/03/04 | | |
| :-1.3Dichloropropene | ug/Kg | < 1200 | | 03/03/04 | | |
| Coluene | ug/Kg | 900000 | | 03/03/04 | | |
| ac: | 4.7 | | | 1744 194 | | |

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

Page

rn = 5322

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, NY 631 422-5777 11703

LAR NO. 240597.04

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti.

P0#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1420

MATRIX:Soil

SAMPLE: ASP-4 Comp ASP-4 Comp

Results reported on a dry weight basis

| | | gautre repu | DATE OF | nt bas. | ANALYTICAL |
|-----------------------|-------|-------------|----------|---------|------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | | LRL | METHOD |
| t-1,3Dichloropropene | ug/Kg | < 1200 | 03/03/04 | | |
| 112 Trichloroethane | ug/Kg | < 1200 | 03/03/04 | | |
| Tetrachloroethene | ug/Kg | 12000 | 03/03/04 | | |
| 1,3-Dichloropropane | ug/Kg | < 1200 | 03/03/04 | | |
| Chlorodibromomethane | ug/Kg | < 1200 | 03/03/04 | | |
| 1,2 Dibromoethane | ug/Kg | < 1200 | 03/03/04 | | |
| Chlorobenzene | ug/Kg | < 1200 | 03/03/04 | | |
| Ethyl Benzene | ug/Kg | 120000 | 03/03/04 | | |
| 1112Tetrachloroethane | ug/Kg | < 1200 | 03/03/04 | | |
| m + p Xylene | ug/Kg | 470000 | 03/03/04 | | EPA8260 |
| Xylene | ug/Kg | 120000 | 03/03/04 | 1234.5 | EPA8260 |
| Lyrene | ug/Kg | 44000 | 03/03/04 | | |
| Rromoform | ug/Kg | < 1200 | 03/03/04 | | |
| Isopropylbenzene | ug/Kg | 9400 | 03/03/04 | | |
| Bromobenzene | ug/Kg | < 1200 | 03/03/04 | 1234.5 | EPA8260 |
| [122Tetrachlorosthane | ug/Kg | < 1200 | 03/03/04 | | |
| 123-Trichloropropane | ug/Kg | < 1200 | 03/03/04 | 1234.5 | EPA8260 |
| 1-Propylbenzene | ug/Kg | 17000 | 03/03/04 | | |
| 2-Chlorotoluene | UB/KE | < 1200 | 03/03/04 | 1234.5 | EPA8260 |
| 135-Trimethylbenzene | ug/Kg | 37000 | 03/03/04 | 1234.5 | EPA8260 |
| i-Chlorotoluene | ug/Kg | < 1200 | 03/03/04 | 1234.5 | EPA8260 |
| tert-Butylbenzene | ug/Kg | < 1200 | 03/03/04 | | |
| 124-Trimethylbenzene | ug/Kg | 91000 | 03/03/04 | | |
| sec-Butylbenzene | ng/Kg | 2500 | 03/03/04 | | |
| -Isopropyltoluene | ug/Kg | 2800 | 03/03/04 | 1234.5 | EPA8260 |
| cc: | | | | | |

LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

DIRECTOR

EcoTest Laboratories 377 Sheffield Ave North Babylon, NY 631 422-5777 Inc 11703

LAB NO.240597.04

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum. #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum. #628188

COLLECTED BY: Client

DATE COL'D:02/18/04 RECEIVED:02/19/04 TIME COL'D:1420

MATRIX: Soil

SAMPLE: ASP-4 Comp ASP-4 Comp

Results reported on a dry weight basis

| | | ALTERNATION OF THE ST | 1000 | DATE OF | | ANALYTICAL | |
|--|-------|-----------------------|---------|----------|--------|--------------|--|
| AWALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD | |
| 1,3 Dichlorobenzene (v) | ug/Kg | < 1200 | R. Cock | 03/03/04 | | EPA8260 | |
| 1,4 Dichlorobenzene (v) | ug/Kg | < 1200 | | 03/03/04 | | | |
| n-Butylbenzene | ug/Kg | < 1200 | | 03/03/04 | | | |
| 1.2 Dichlorobenzene (v) | ug/Kg | 4900 | | 03/03/04 | | | |
| Dibromochloropropane | ug/Kg | < 1200 | | 03/03/04 | | | |
| 124-Trichlorobenzene (v) | ug/Kg | < 1200 | | 03/03/04 | | | |
| Hexachlorobutadiene | ug/Kg | < 1200 | | 03/03/04 | | | |
| Naphthalene(v) | ug/Kg | 63000 | | 03/03/04 | | | |
| 123-Trichlorobenzene | ug/Kg | < 1200 | | 03/03/04 | | | |
| tar . ButylMethylEther | ug/Kg | < 1200 | | 03/03/04 | | | |
| -Ethyltoluene | ug/Kg | 96000 | | 03/03/04 | | | |
| reon 113 | ug/Kg | < 1200 | | 03/03/04 | | | |
| 1245 Tetramethylbenz | ug/Kg | 38000 | | 03/03/04 | | | |
| Acetone | ug/Kg | < 12000 | | 03/03/04 | 12345. | EPA8260 | |
| Methyl Ethyl Ketone | ug/Kg | < 12000 | | 03/03/04 | | | |
| Methylisobutylketone | ug/Kg | < 12000 | | 03/03/04 | | | |
| Chlorodifluoromethane | ug/Kg | < 1200 | | 03/03/04 | | | |
| p Diethylbenzene | ug/Kg | < 1200 | | 03/03/04 | | | |
| MS Library Search (Vol)
Library Search, VOC | | | | | | | |
| & Solids | | 81 | | 02/20/04 | 0.1 | SM182540G | |
| HAM ARA | | × • | | 06/40/04 | | DIFECED 3400 | |

cc:

VOC QCQA

LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

of 12 Page

DIRECTOR

rn = 5324

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, 631 422-5777 NY 11703

LAB NO.240597.04

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188

SOURCE OF SAMPLE: Bayonne Barrel and Drum. #628188 COLLECTED BY: DATE COL'D:02/18/04 RECEIVED:02/19/04 Client

TIME COL'D:1420

MATRIX: Soil

SAMPLE: ASP-4 Comp

ASP-4 Comp

Results reported on a dry weight basis
DATE OF A ANALYTICAL ANALYTICAL PARAMETERS UNITS RESULT FLAG ANALYSIS LRL METHOD N-Nitrosodimethylamine < 370 03/02/04 370.37 EPAB270 ug/Kg Bis(2-chloroethyl)ether ug/Kg < 370 03/02/04 370.37 EPA8270 1,3 Dichlorobenzene(sv) < 370 03/02/04 370.37 EPA8270 ug/Kg 1,4 Dichlorobenzene(sv)
1,2 Dichlorobenzene(sv) 03/02/04 370.37 EPA8270 03/02/04 370.37 EPA8270 03/02/04 370.37 EPA8270 < 370 ug/Kg ug/Kg < 370 Bis(2-chloroisopropyl)ether ug/Kg < 370 03/02/04 370.37 EPA8270 03/02/04 370.37 EPA8270 03/02/04 370.37 EPA8270 N-Nitrosodi-n-propylamine < 370 < 370 ug/Kg Hexachloroethane ug/Kg Nitrobenzene < 370 ug/Kg Tapphorone ug/Kg 5800 03/02/04 370.37 EPA8270 is (2-chloroethoxy) methane 03/02/04 370.37 EPA8270 < .370 ug/Kg .24-Trichlorobenzene (sv) 03/02/04 370.37 EPA8270 ug/Kg 2200 Naphthalene(sv) 03/02/04 370.37 EPA8270 ug/Kg 30000 Hexachlorobutadiene < 370 03/02/04 370.37 EPA8270 ug/Kg 03/02/04 3703.7 EPA8270 03/02/04 370.37 EPA8270 Hexachlorocyclopentadiene ug/Kg < 3700 2-Chloronaphthalene < 370 ug/Kg Dimethyl Phthalate 03/02/04 370.37 EPA8270 < 370 ug/Kg Acenaphthylene 03/02/04 370.37 EPA8270 ug/Kg < 370 2,6-Dinitrotoluene ug/Kg < 370 03/02/04 370.37 EPA8270 Acenaphthene < 370 03/02/04 370.37 EPA8270 ug/Kg 2.4-Dinitrotoluene ug/Kg < 370 03/02/04 370.37 EPA8270 Diethyl Phthalate 5200 UR/KR 03/02/04 370.37 EPA8270 Fluorene

LRL=laboratory Reporting Limit

03/02/04 370.37 EPA8270

03/02/04 370.37 EPA8270

03/02/04 370.37 EPA8270

REMARKS:

4-Chlorophenyl phonyl ether ug/Kg

DIRECTOR

Page

1000

< 370

20000

ug/Kg

ug/Kg

N-Nitrosodiphenylamine

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, NY 631 422-5777 11703

LAB NO.240597.04

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
Bayonne Barrel and Drum, #628188
Client DATE COL'D:02/18/04 RECEIVED:02/19/04

COLLECTED BY: Client

TIME COL'D: 1420

MATRIX: Soil

SAMPLE: ASP-4 Comp ASP-4 Comp

Results reported on a dry weight basis

| | | | | DATE OF | | ANALYTICAL |
|----------------------------|-------|--------|------|---------------------|--------|------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | A R A COMP AND REST | LRL | METHOD |
| 1,2-Diphenylhydrazine | ug/Kg | < 370 | | 03/02/04 | 370.37 | EPAB270 |
| 4-Bromophenyl phenyl ether | ug/Kg | < 370 | | 03/02/04 | 370.37 | EPA8270 |
| Hexachlorobenzene | ug/Kg | < 370 | | 03/02/04 | 370.37 | EPA8270 |
| Phenanthrene | ug/Kg | 4000 | | 03/02/04 | | |
| Anthracene | ug/Kg | 560 | | 03/02/04 | 370.37 | EPA8270 |
| Di-n-Butyl Phthalate | ug/Kg | 35000 | | 03/02/04 | 370.37 | EPA8270 |
| Fluoranthene | ng/Kg | 1400 | | 03/02/04 | | |
| Renzidine | ug/Kg | < 3700 | | 03/02/04 | | |
| Pyrene | ug/Kg | 4700 | * | 03/02/04 | 370.37 | EPA8270 |
| Benzyl Butyl Phthalate | ug/Kg | 100000 | | 03/01/04 | | |
| Benzo(a)anthracene | ug/Kg | B50 | * | 03/02/04 | 370.37 | EPA8270 |
| 3.3'-Dichlorobenzidine | ug/Kg | < 3700 | ** | 03/02/04 | | |
| Chrysene | ug/Kg | 1100 | * | 03/02/04 | | |
| Bis(2-ethylhexyl)phthalate | ug/Kg | 300000 | | 03/01/04 | 3703.7 | EPA8270 |
| Di-n-octyl Phthalate | ug/Kg | 7900 | ** | 03/02/04 | 370.37 | EPA8270 |
| Benzo(b)fluoranthene | ug/Kg | 590 | 女女非 | 03/02/04 | 370.37 | EPA8270 |
| Benzo(k)fluoranthene | ug/Kg | 590 | **# | 03/02/04 | 370.37 | EPA8270 |
| Benzo(a)pyrene | ug/Kg | 480 | ** | 03/02/04 | 370.37 | EPA8270 |
| Indeno(1,2,3-cd)pyrene | ug/Kg | 460 | 公大 | 03/02/04 | 370.37 | EPA8270 |
| Dibenzo(a,h)anthracene | ug/Kg | < 370 | ** | 03/02/04 | 370.37 | EPA8270 |
| Benzo(ghi)perylena | ug/Kg | 530 | ** | 03/02/04 | 370.37 | EPA8270 |
| | | | | | | |

Base Neutrals QAQC MS Library Search (BN)

cc:

LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

*, **Estimated due to low internal standard recovery, *30% & **24%. Low recovery due to interference. QC limit is 50%. #Total = 1180 ug/Kg, unable to separate isomers.

DIRECTOR

NYSDOH ID # 10320

of 12

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, NY 631 422-5777 11703

LAB NO.240597.04

03/04/04

Code Environmental Services, Inc. 400 Middlesex Avenue

Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE:

Bayonne Barrel and Drum, #628188

SOURCE OF SAMPLE: Bayonne COLLECTED BY: Client

Bayonne Barrel and Drum, #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D: 1420

MATRIX: Soil

SAMPLE: ASP-4 Comp ASP-4 Comp

Results reported on a dry weight basis

| | | | | | DATE OF | | ANALYTICAL |
|---|----------------------------|-------|--------|------|----------|---|------------|
| | ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD |
| | Phono1 | ug/Kg | 9400 | 1.77 | 03/02/04 | 370.37 | EPA8270 |
| | 2-Chlorophenol | ug/Kg | < 3/0 | | 03/02/04 | | EPA8270 |
| | 2-Nitrophenol | ug/Kg | < 370 | | 03/02/04 | | |
| | 2,4-Dimethylphenol | ug/Kg | < 370 | | 03/02/04 | | |
| | 2,4-Dichlorophenol | ug/Kg | < 370 | | 03/02/04 | 370.37 | EPAB270 |
| | 4-Chloro-3-methylphenol | ug/Kg | < 370 | | 03/02/04 | 370.37 | EPA8270 |
| | 2.4.5-Trichlorophenol | ug/Kg | < 370 | | 03/02/04 | | |
| | 4-Nitrophenol | ug/Kg | < 3700 | | 03/02/04 | 3703.7 | EPA8270 |
| | 2,4-Dinitrophenol | ug/Kg | < 3700 | | 03/02/04 | 100000000000000000000000000000000000000 | |
| _ | 2-Methyl-4.6-dinitrophenol | ug/Kg | < 3700 | | 03/02/04 | | |
| | Pentachlorophenol (ms) | ug/Kg | < 3700 | | 03/02/04 | | |
| | | | | | | | |

MS Library Search (AE)

Acid Ex. QAQC

cc:

LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

Page

DIRECTOR

rn = 5327

NYSDOH ID # 10320

EcoTest Laboratories 377 Sheffield Ave North Babylon, NY 631 422-5777 11703

LAB NO.240597.04

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1420

SAMPLE: ASP-4 Comp MATRIX: Soil

ASP-4 Comp

Results reported on a dry weight basis

| | | | | DATE OF | | ANALYTICAL | |
|-----------------------|----------|--------|---------|----------|--------|------------|--|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | | METHOD | |
| Antimony as Sb | | 74 | 1.21.05 | 03/01/04 | | | |
| Arsenic as As | mg/Kg | < 3.1 | | 03/01/04 | 3.0864 | EPA6010 | |
| Beryllium as Be | mg/Kg | < 0.62 | | 03/01/04 | | | |
| Cadmium as Cd | mg/Kg | 110 | | 03/01/04 | | | |
| Chromium as Cr | mg/Kg | 1400 | | 03/01/04 | | | |
| Copper as Cu | mg/Kg | 1000 | | 03/01/04 | | | |
| Lead as Pb | mg/Kg | 7900 | | 03/01/04 | | | |
| Mercury as Hg | mg/Kg | 3.6 | | 02/24/04 | 0.2469 | EPA7470A | |
| Nickel as Ni | mg/Kg | 86 | | 03/01/04 | 6.1728 | EPA6010 | |
| Selenium as Se | mg/Kg | < 4.9 | | 03/02/04 | 4.9382 | EPA7740 | |
| Silver as Ag | mg/Kg | 12 | | 03/03/04 | 0.6913 | EPA7760A | |
| Thallium as Tl | mg/Kg | < 6.2 | | 03/01/04 | 6.1728 | EPA6010 | |
| Zinc as Zn | mg/Kg | 2500 | | 03/01/04 | 6.1728 | EPA6010 | |
| Metals, QCOA | 1,22,000 | | | | | | |

cc:

LRL=laboratory Reporting Limit

REMARKS:

DIRECTOR

Page 10

NYSDOH ID # 10320

EcoTest Laboratories 377 Sheffield Ave North Babylon, NY 631 422-5777 Inc 11703

LAB NO. 240597.04

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti ATTN:

P0#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL. D: 02/18/04 RECEIVED: 02/19/04

TIME COL'D: 1420

MATRIX: Soil

SAMPLE: ASP-4 Comp ASP-4 Comp

Results reported on a dry weight basis

| | *** | dedito repo | | DATE OF | | ANALYTICAL |
|-----------------------|-------|-------------|------|----------|--------|------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD |
| Lindane | ug/Kg | < 62 | | 03/02/04 | 61.728 | EPA8081 |
| Heptachlor | ug/Kg | < 62 | | 03/02/04 | 61.728 | EPA8081 |
| Aldrin | ug/Kg | < 62 | | 03/02/04 | 61.728 | EPAB081 |
| Heptachlor Epoxide | ug/Kg | < 62 | | 03/02/04 | | |
| p.p-DDE | ug/Kg | 1200 | | 03/02/04 | 61.728 | EPABOB1 |
| Dieldrin | ug/Kg | < 62 | | 03/03/04 | 61.728 | EPA8081 |
| Endrin | ug/Kg | < 62 | | 03/03/04 | | |
| p,p-DDD | ug/Kg | < 62 | | 03/02/04 | | |
| p.p-DDT | ug/Kg | < 120 | | 03/02/04 | | |
| Chlordane | ug/Kg | < 250 | | 03/02/04 | | |
| Toxaphene | ug/Kg | < 1200 | | 03/02/04 | | |
| Endrin Aldehyde | ug/Kg | < 370 | | 03/03/04 | | |
| a RHC | ug/Kg | < 62 | | 03/02/04 | | |
| ь вис | ug/Kg | < 62 | | 03/02/04 | 61.728 | EPA8081 |
| d BHC | ug/Kg | < 62 | | 03/02/04 | | |
| Endosulfan 1 | ug/Kg | < 120 | | 03/02/04 | 123.45 | EPA8081 |
| | | | | | | |

cc:

LRL=laboratory Reporting Limit

REMARKS:

Page 10

NYSDOH ID # 10320

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, NY 631 422-5777 11703

LAB NO.240597.04

03/04/04

Code Environmental Services, Inc. 400 Middlesex Avenue

Carteret, NJ 07008

Tom Tomassetti ATTN:

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188

SOURCE OF SAMPLE: COLLECTED BY: Bayonne Barrel and Drum, #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D: 1420

MATRIX: Soil

SAMPLE: ASP-4 Comp

ASP-4 Comp Results reported on a dry weight basis

| | | | | DATE OF | | ANALYTICAL |
|-----------------------|--|----------|------------|-------------|----------|--|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD |
| Endosulfan 2 | ug/Kg | < 120 | - Salarita | 03/04/04 | 123.45 | EPA8081 |
| Endosulfan Sulfate | ug/Kg | | | 03/04/04 | | |
| Pest QAQC | | | | | 04.402.4 | |
| Aroclor 1016 | ug/Kg | < 31000 | | 03/03/04 | 30864 | EPA8082 |
| Aroclor 1221 | The state of the s | < 31000 | | 03/03/04 | | The state of the s |
| Aroclor 1232 | ug/Kg | | | 03/03/04 | | |
| Aroclor 1242 | ug/Kg | < 31000 | | 03/03/04 | | |
| Aroclor 1248 | ug/Kg | 330000 | | 03/03/04 | | |
| Aroclor 1254 | ug/Kg | < 31000 | | 03/03/04 | | |
| Aroclor 1260 | ug/Kg | < 31000 | | 03/03/04 | | EPA8082 |
| Pest QAQC | | | | | 20000 | 7111777 |
| Jyanide as CN | mg/Kg | 6.8 | | 02/25/04 | 2.4691 | EPA335.3 |
| Phenols as Phenol | mg/Kg | 79 | | | | EPA420.1 |
| Reactive cyanide | mg/Kg | < 2.5 | | | | EPA335.4 |
| Sulfide as S | mg/Kg | < 2.5 | | | | EPA376.2 |
| pH (lab) units | | 6.3 | | 02/20/04 | | EPA9045C |
| Flash Point deg C | | > 100 | | 02/23/04 | | EPA1010 |
| Quality Control | | 3 125.73 | | 35, 35, 33, | 755 | 27.71.7.20.2 |

cc;

LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

DIRECTOR

of 12

EcoTest Laboratories, Inc.

Environmental Testing

377 Sheffield Avenue North Babylon, New York 11703 (631) 422-5777 Fax: (631) 422-5770

E-mail: ecotestlab@aol.com

Website: www.ecotestlabs.com

FAX TRANSMISSION COVER SHEET

Date: March 4, 2004

To: Tom Tomassetti

Code Environmental

Fax: 973 274-1753

Re: Bayonne Barrel and Drum, #628188

Lab No. 240597 (.05-.06)

Sender: Fran Alicastro

Office Manager

YOU SHOULD RECEIVE 25 PAGE(S), INCLUDING THIS COVER SHEET. IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL (631) 422-5777.

| | | | 18 | 21.2 | . 4 | SAMPLE | NO. | |
|-----------------------|--------------|--------------------------------------|------------------------------|-----------|---------------|-----------|-------|---|
| | | VOLATILE ORGANICS
TENTATIVELY IDE | | | r | 2408 | 97.04 | |
| Lab Name: ECOTE | ST LABS | | Contract: | | | | | - |
| Project No.: | | Site: | Location: | | | Group: | | |
| Matrix: (soil/water) | Soil | _ | | Lai | Sample ID: | 240597.04 | | |
| Sample wt/vol: | 5.0 | Ig/mLi g | 5.7 | | Lab File ID: | 03020431 | D | |
| Level: (low/med) | Low | 7 / 1 | | Da | te Received: | 2/19/04 | | _ |
| % Solid: | 81 | | | | te Analyzed: | | | |
| GC Column: | MXT-624 | ID: 0.53 | (mm) | | ution Factor: | | | |
| Soil Extract Volume: | | imLi | | | uot Volume: | | 441 | |
| SUI EXTRACT VIXUITIS. | | - Inter | | SON AND | dot volume. | | iuci | |
| Number TICs found: | 10 | | Concentration
(ug/L or ug | r a racer | ug/Kg | | | |
| | CAS Number | Compou | nd Name | RT | Est. Conc. | a | I. | |
| | 1. 142-82-5 | Heptano | 22 2 2 2 1 | 8.58 | 6300 | J. 100 | | |
| P . | 2, 108-87-2 | Cyclohexane, methy | | 9.67 | 12000 | 1 | В. | |
| 1 | 3. | Unknown Hydrocarl | | 13.15 | 13000 | 1 | | |
| | 4. | Unknown Hydrocarl | oon | 14.22 | | J | r. | |
| | 5. | Unknown Hydrocarl | | 16.84 | | J | | |
| | 6. 620-14-4 | Benzene, 1-ethyl-3- | | 18.07 | | J | 1 | |
| | 7. | Unknown Hydrocari | | 19.58 | | J | 1 | |
| | 8. 527-84-4 | Benzene, 1-methyl-2 | | 20.28 | | J | 1 | |
| | 9. 934-80-5 | Benzene,4-ethyl-1,2 | | 20.40 | | J | 4 | |
| | 10. 874-35-1 | 1H-Indane, 2,3-dihy | dro-5-meth | 21.98 | 18000 | | ł. | |
| | 11. | | - | | - 1 | | 4 | |
| | 12. | | | | | - | 4 | |
| | 13. | | | | | - | 4 | |
| 19 | 14. | | | | | | 1 | |
| | 15. | | | | 1 | | 4 | |
| | 16. | | | | | | 4: | |
| | 17. | | | | | - | 4 | |
| | 18. | | - | | | | ₹ | |
| | 19. | | | _ | - | | 1 | |
| | 21. | | | | - | | • | |
| | 22. | | | - | | | 1 | |
| | 23. | | | - | - | | 1 | |
| | 24. | - | | | | | | |
| | 25. | - | | | *** | 200 | 1 | |
| | 26. | | | | | 170 4 | 4 | |
| | 27. | | | | | | 1 | |
| | 28. | | | - | 1 7 7 7 | | 1 | |
| | 29. | 75.7 | | | | | 1 | |
| | 30. | | | - | | 77 | 1 | |
| | | | | | - | | - | |

1F SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

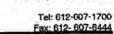
| 0 | A. | EL | Ε. | MC | ٠ |
|---|----|-----|----|----|---|
| | 24 | 046 | 7 | 04 | |

| Lab Name: ECOTEST L | ABS | | | Contract: | | |
|--------------------------|------|---------|--------------|------------------------------|------------------|------------|
| Project No.: | | Site | e: | Location: | | Group: |
| Matrix: (soll/water) | SOIL | | | | Lab Sample ID: | 597.04 |
| Sample wt/vol: | 3.3 | _(g/mL) | G | | Lab File ID: | 03010424.D |
| Level: (low/med) | LOW | | | | Date Received: | 2/19/04 |
| % Moisture: | | deca | inted: (Y/N) | | Date Extracted: | 2/27/04 |
| Concentrated Extract Vol | ume: | 1000 | _(uL) | | Date Analyzed: | 3/2/04 |
| Injection Volume: | 1.0 | _(uL) | 3/10 | | Dilution Factor. | 300.0 |
| GPC Cleanup: (Y/N) | | _ | pH: | | | × |
| Number TICs found: | 13 | | 0 | Concentration
(ug/L or ug | | |

| CAS Number | Compound Name | RT | Est. Canc. | Q |
|----------------|------------------------------|-------|------------|------|
| 1. 108-88-3 | Toluene | 3.99 | 14000 | J |
| 2. 106-42-3 | Benzens, 1,4-dimethyl- | 5.13 | 20000 | J |
| 3. 110-43-0 | 2-Heptanone | 5.32 | 2100 | J |
| 4. 108-38-3 | Benzena, 1,3-dimethyl- | 5.36 | 8800 | J |
| 5, 629-99-2 | Pentacosane | 6.29 | 3300 | 1 |
| 6. 95-63-6 | Benzene, 1,2,4-trimethyl- | 6.33 | 8000 | 7 |
| 7. 108-67-8 | Benzene, 1,3,5-trimethyl- | 6.59 | 6100 | J |
| 8. 135-01-3 | Banzene, 1,2-diethyl- | 5.77 | 3100 | J |
| 9. 535-77-3 | Benzens, 1-methyl-3-(1-methy | 7.08 | 8800 | J |
| 10. 1587-04-8 | Benzene, 1-methyl-2-(2-prope | 7.63 | 13000 | J |
| 11. 629-50-5 | Tridecane | 8.50 | 12000 | J |
| 12, 62338-14-1 | Decane, 3,3,6-trimethyl- | 10.28 | 12000 | J |
| 13. 7098-22-8 | Tetratetracontane | 11.34 | 12000 | 1 |
| 14. | | | | |
| 16. | | | 1 | |
| 16. | | - | C | |
| 17. | | | A 90 - 1 | 1 |
| 18. | | 1000 | 19 | |
| 19. | | 1750- | | - |
| 20. | | | - 2,3 | |
| 21. | | | | |
| 22. | | | 1000 | - 40 |
| 23. | | 15 | | |
| 24. | | Take | | |
| 25. | | | | |
| 26. | | 150 | | |
| 27. | | 1000 | T " - " | TE C |
| 28. | | | 1,5 | |
| 29. | | | | 11.5 |
| 30. | | | | |
| | | | | |

CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately

| - Fact Analytical | | Pa | age: / of / | | |
|--|---|-----------------|---|--|-------------------|
| Required Client Information: Section A | Required Client Information: Section | on B CH | ient Information (Check quote/contract): | To Se Completed by Pace Analytical Client | Section C |
| Company CODE ENVIRON. SUO | IN Report TO: TOM TOMPS | | equested Due Date: 3-5-04 | Quote Reference: MSP0500 | 4 |
| Addison: 400 MIDDLESEX AVE. | COPY TO: COOK ENW. S | UCY, INC. TA | AT: 10 BUS. DAYS | Project Manager: | |
| CAR FRANT NOT OTO | 08 Invoice To: CODE ENV 5 | IC'S TAKE THE | | Project #: | |
| Phonos - 969-2700 Fas 32-969-270 | 1 P.O. 30004 | Labora | prestary and contractant obligations and may | Profile #: 1024863 | 5 |
| 772 767-2700, 772 767 270 | Project Name: BAYONNED | SARPE! INSR | Rush-Turnaround Serchage. | 120,000 | |
| | Project Number: 628188 | Tuni | Arount Time (TAT; In colonider days. | | |
| Required Client Information: Section D | Valid Matrix Codes Y | | Preservatives (1) | Requested Analysis | |
| SAMPLE ID (One charete) | Water WT Golf SL G | 8 | TIME COLLECTED * Consumers Ungeneered HESON HICH HICH HICH HICH HICH HICH HICH HIC | | REMARKS / Lab ID |
| 45P-2 COMP | 9 | 12-18-4 10 | 0:25 1 X | | 5346472 |
| D5P-2 COMP | 1 | 2-13-041 | | | 1 480 |
| ASP-3 COMP | 5/ | 2-18-04 1: | 50 1X X | | 498 |
| ASP-4 COMP | | | :20 /X | | 306 |
| ASP-SCOMP | 5/ | | | | 514 |
| CYA-1 COMP | Si Si | | 7:20 1 X | | V 527 |
| | | -12/0 07/ | | | V |
| | | 1 1 | | | |
| | - - - - - - | | | | |
| | | | | | 1 |
| ⁴⁰ | | | | +++++++ | |
| | | +-+ | - | +++++ | |
| SHEMENT METROD AIRBULING | SHIPPING DATE NO C COOLERS | 1705) // | RETINQUISHED BY / ALFILIA BON | DATE TIME ACCIDED, BY/A | WILLIAM DATE TIME |
| Mark Comment of the C | ALC: A CONTRACTOR OF THE PARTY | | Fr lite (lost laver | | 2016- Blob 69 |
| Ufs Pin 18539 | 2-18-4 1 | 1 | Freder Clod Zur | DINATE DIDE | 12 Divers |
| BAMPLE CONDITION: SAMPLE NOTE | | | | | |
| emp in C | per Tem is wholen | | | | |
| The state of the s | | | e kals ovek (kladi | | |
| Sealed Cooler Y .(N , | | PRINT Name of S | FANG SIGNATURE | and the state of t | |
| Semple Intact (YY N | | SIGNATURE of S | THE DEFICE MADLE | With- | DATE Signed: |
| Additional Comments: | | SIGNATURE OF S | I redich lide | anne | DATE Signed: |





Method 8290 Blank Analysis Results

Client - Code Environmental Services

Lab Sample ID Filename

Total Amount Extracted ICAL Date CCal Filename(s)

BLANK-4388 U40225A_11 20.0 g 10/03/2003

U40225A_08 & U40225A_23

Matrix Dilution Extracted Analyzed

Injected By

Solid NA 02/23/2004 02/25/2004 17:01

SMT

| Native
Isomers | Conc
ng/Kg | EMPC
ng/Kg | LRL
ng/Kg | Internal
Standards | ng's
Added | Percent
Recovery |
|------------------------------------|---------------|---------------|--------------|--|---------------|----------------------|
| 2,3,7,8-TCDF | 0.11 | | 0.100 J | 2,3,7,8-TCDF-13C | 2.00 | 56 |
| Total TCDF | 0.35 | | 0.100 J | 2.3.7.8-TCDD-13C | 2.00 | 59 |
| was a successful | 27247 | | 27.7.2 | 1,2,3,7,8-PeCDF-13C | 2.00 | 53
53
55
52 |
| 2,3,7,8-TCDD | ND | | 0.110 A | 2,3,4,7,8-PeCDF-13C | 2.00 | 55 |
| Total TCDD | ND | | 0.100 | 1,2,3,7,8-PeCDD-13C | 2.00 | 50 |
| 1 2 2 7 0 DaCDE | ND | - | 0.500 | 1,2,3,4,7,8-HxCDF-13C
1,2,3,6,7,8-HxCDF-13C | 2.00 | 62 |
| 1,2,3,7,8-PeCDF
2,3,4,7,8-PeCDF | ND | | 0.500 | 2,3,4,6,7,8-HxCDF-13C | 2.00 | 59 |
| Total PeCDF | ND | | 0.500 | 1,2,3,7,8,9-HxCDF-13C | 2.00 | 54 |
| Total Fecol | NO | | WARR | 1,2,3,4,7,8-HxCDD-13C | 2.00 | 58 |
| 1,2,3,7,8-PeCDD | ND | | 0.500 | 1,2,3,6,7,8-HxCDD-13C | 2.00 | 68 |
| Total PeCDD | ND | **** | 0.500 | 1,2,3,4,6,7,8-HpCDF-13C | 2.00 | 62 |
| | Cape | | . 515,50 | 1,2,3,4,7,8,9-HpCDF-13C | 2.00 | 54 |
| 1,2,3,4,7,8-HxCDF | ND | **** | 0.500 | 1,2,3,4,6,7,8-HpCDD-13C | 2.00 | 60 |
| 1,2,3,6,7,8-HxCDF | ND | - | 0.500 | OCDD-13C | 4.00 | 51 |
| 2,3,4,6,7,8-HxCDF | ND | | 0.500 | | -0100 | -01 |
| 1,2,3,7,8,9-HxCDF | ND | **** | 0.500 | 1,2,3,4-TCDD-13C | 2.00 | NA |
| Total HxCDF | ND | - | 0.500 | 1,2,3,7,8,9-HxCDD-13C | 2.00 | NA |
| 1,2,3,4,7,8-HxCDD | ND | يستسو | 0.500 | 2,3,7,8-TCDD-37Cl4 | 0.20 | 65 |
| 1,2,3,6,7,8-HxCDD | ND | - | 0.500 | | | |
| 1,2,3,7,8,9-HxCDD | ND | | 0.500 | | | |
| Total HxCDD | ND | term. | 0.500 | | | |
| 1,2,3,4,6,7,8-HpCDF | ND | - | 0.500 | Total 2,3,7,8-TCDD | | |
| 1,2,3,4,7,8,9-HpCDF | ND | ***** | 0.500 | Equivalence: 0.011 ng/Kg | | |
| Total HpCDF | ND | | 0.500 | (Using ITE Factors) | | |
| 1,2,3,4,6.7,8-HpCDD | ND | - | 0.500 | | | |
| Total HpCDD | 0.56 | | 0.500 J | | | |
| OCDF | ND | | 1.000 | | | |
| OCDD | ND | _ | 1.000 | | | |

Conc = Concentration (Totals include 2,3,7,8-substituted isomers). EMPC = Estimated Maximum Possible Concentration

LRL = Lower Reporting Limit
J = Concentration detected is below the calibration range

P = Recovery outside of target range A = Detection Limit based on signal-to-noise measurement

i = Interference

E = PCDE Interference

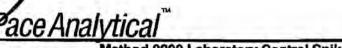
ND = Not Detected

NA = Not Applicable

NC = Not Calculated * = See Discussion

Report No....1084865

REPORT OF LABORATORY ANALYSIS



Tel: 612-807-1700 Fax: 612-607-6444

Method 8290 Laboratory Control Spike Results

Client - Code Environmental Services

Lab Sample ID Filename **Total Amount Extracted ICAL Date** CCal Filename(s)

Method Blank ID

LCS-4389 U40225A_09 20.0 g 10/03/2003 U40225A_08 & U40225A_23 BLANK-4388

Matrix Dilution Extracted Analyzed Injected By Solid NA

02/23/2004 02/25/2004 15:22 SMT

| Native
Isomers | Qs
(ng) | Qm
(ng) | %
Rec. | Internal
Standards | ng's
Added | Percent
Recovery |
|---|------------|------------|-----------|---|----------------------|---------------------|
| 2,3,7,8-TCDF | 0.20 | 0.18 | 88 | 2,3,7,8-TCDF-13C
2,3,7,8-TCDD-13C
1,2,3,7,8-PeCDF-13C | 2.00
2.00
2.00 | 59
61
57 |
| 2,3,7,8-TCDD | 0.20 | 0.18 | 92 | 2,3,4,7,8-PeCDF-13C
1,2,3,7,8-PeCDD-13C | 2.00
2.00
2.00 | 58
60
53 |
| 1,2,3,7,8-PeCDF | 1.00 | 0.91 | 91 | 1,2,3,4,7,8-HxCDF-13C
1,2,3,6,7,8-HxCDF-13C | 2.00 | 65 |
| 2.3.4.7.8-PeCDF | 1.00 | 0.87 | 87 | 2,3,4,6,7,8-HxCDF-13C | 2.00 | 63 |
| | 1.00 | 0.07 | u, | 1,2,3,7,8,9-HxCDF-13C
1,2,3,4,7,8-HxCDD-13C | 2.00 | 58
57 |
| 1,2,3,7,8-PeCDD | 1.00 | 0.95 | 95 | 1,2,3,6,7,8-HxCDD-13C | 2.00 | 75 |
| ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 1.00 | 0.00 | 55 | 1,2,3,4,6,7,8-HpCDF-13C | 2.00 | 63 |
| | | | | 1,2,3,4,7,8,9-HpCDF-13C | 2.00 | 57 |
| 1,2,3,4,7,8-HxCDF | 1.00 | 0.95 | 95 | 1,2,3,4,6,7,8-HpCDD-13C | 2.00 | 63 |
| 1,2,3,6,7,8-HxCDF | 1.00 | 0.95 | 95 | OCDD-13C | 4.00 | 55 |
| 2,3,4,6,7,8-HXCDF | 1.00 | 0.95 | 95 | | | |
| 1,2,3,7,8,9-HxCDF | 1.00 | 0.93 | 93 | 1,2,3,4-TCDD-13C | 2.00 | NA |
| | | | | 1,2,3,7,8,9-HxCDD-13C | 2.00 | NA |
| 1,2,3,4,7,8-HxCDD | 1.00 | 0.92 | 92 | 2,3,7,8-TCDD-37Cl4 | 0.20 | 75 |
| 1.2.3.6.7.8-HxCDD | 1.00 | 0.96 | 96 | | | |
| 1,2,3,7,8,9-HxCDD | 1.00 | 0.99 | 99 | | | |
| 1,2,3,4,6,7,8-HpCDF | 1.00 | 0.99 | 99 | | | |
| 1,2,3,4,7,8,9-HpCDF | 1.00 | 1.02 | 102 | | | |
| 1,2,3,4,6,7,8-HpCDD | 1.00 | 1.02 | 102 | | | |
| OCDF | 2.00 | 1.84 | 92 | | | |
| OCDD | 2.00 | 2.01 | 100 | | | |

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range

X = Background subtracted value

Nn = Value obtained from additional analysis

NA = Not Applicable * = See Discussion

Report No.....1084865

REPORT OF LABORATORY ANALYSIS

ace Analytical

Tel: 612-607-1700 Fex: 612-607-6444

Method 8290 Analysis Results

Client - Code Environmental Services

Client's Sample ID ASP-4 COMP Lab Sample ID 105346506 Filename U40226A_13 Injected By BAL **Total Amount Extracted** 12.2 g Matrix Sall % Moisture 18.0 Dilution 10 **Dry Weight Extracted** 02/18/2004 10.0 g Collected ICAL Date 10/03/2003 Received 02/19/2004 CCal Filename(s) U40226A_01 & U40226A_18 BLANK-4388 Extracted 02/23/2004 Method Blank ID 02/27/2004 01:21 Analyzed

| Native
Isomers | Conc
ng/Kg | EMPC
ng/Kg | LRL
ng/Kg | | Internal
Standards | ng's
Added | Percent
Recovery |
|---------------------|---------------|---------------|--------------|----|--------------------------|---------------|---------------------|
| 2,3,7,8-TCDF | | 46000 | 53.0 | EA | 2,3,7,8-TCDF-13C | 2.00 | 99 |
| Total TCDF | 750000 | **** | 2.0 | | 2,3,7,8-TCDD-13C | 2.00 | . 68 |
| | | | | | 1,2,3,7,8-PeCDF-13C | 2.00 | 79 |
| 2,3,7,8-TCDD | 140 | | 9.0 | A | 2,3,4,7,8-PeCDF-13C | 2.00 | 116 |
| Total TCDD | 1900 | | 2.0 | | 1,2,3,7,8-PeCDD-13C | 2.00 | 71 |
| | | | | | 1,2,3,4,7,8-HxCDF-13C | 2.00 | 83 |
| 1,2,3,7,8-PeCDF | 27000 | _ | 160.0 | A | 1,2,3,6,7,8-HxCDF-13C | 2.00 | 68 |
| 2,3,4,7,8-PeCDF | 66000 | | 67.0 | A | 2,3,4,6,7,8-HxCDF-13C | 2.00 | 68 |
| Total PeCDF | 300000 | ***** | 10.0 | | 1,2,3,7,8,9-HxCDF-13C | 2.00 | 62 |
| | 111111 | | | | 1,2,3,4,7,8-HxCDD-13C | 2.00 | 77 |
| 1,2,3,7,8-PeCDD | | 260 | 10.0 | 1 | 1.2.3.6.7.8-HxCDD-13C | 2.00 | 71 |
| Total PeCDD | 1000 | 1 | 10.0 | | 1,2,3,4,6,7,8-HpCDF-13C | 2.00 | 110 |
| | 120.40 | | | | 1,2,3,4,7,8,9-HpCDF-13C | 2.00 | 60 |
| 1,2,3,4,7,8-HxCDF | 1 | 98000 | 22.0 | EA | 1,2,3,4,6,7,8-HpCDD-13C | 2.00 | 75 |
| 1,2,3,6,7,8-HxCDF | 18000 | ***** | | | OCDD-13C | 4.00 | 65 |
| 2,3,4,6,7,8-HxCDF | 26000 | - | | A | 0000 .00 | 1,100 | - 53 |
| ,2,3,7,8,9-HxCDF | 7100 | | 58.0 | | 1,2,3,4-TCDD-13C | 2.00 | NA |
| Total HxCDF | 160000 | = | 10.0 | ** | 1,2,3,7,8,9-HxCDD-13C | 2.00 | NA |
| 1,2,3,4,7,8-HxCDD | 320 | | 12.0 | A | 2,3,7,8-TCDD-37Cl4 | 0.20 | 60 |
| 1,2,3,6,7,8-HxCDD | 650 | | 11.0 | | 2,0,7,0 1000 07014 | 0.20 | |
| 1,2,3,7,8,9-HxCDD | 320 | ***** | 14.0 | | | | |
| Total HxCDD | 5900 | ***** | 10.0 | | | | |
| THE THOUSE | 5555 | | 10.0 | | | | |
| 1,2,3,4,6,7,8-HpCDF | 56000 | | 10.0 | | Total 2,3,7,8-TCDD | | |
| .2,3,4,7,8,9-HpCDF | 2700 | | 95.0 | Α | Equivalence: 41000 ng/Kg | | |
| Total HpCDF | 72000 | | 10.0 | | (Using ITE Factors) | | |
| 1,2,3,4,6,7,8-HpCDD | 5800 | - | 19.0 | A | | | |
| Total HpCDD | 11000 | | 10.0 | 3 | | | |
| OCDF | 36000 | ***** | 20.0 | | | | |
| OCDD | 53000 | ***** | 20.0 | | | | |

Results reported on a dry weight basis

Conc = Concentration (Totals Include 2,3,7,6-substituted Isomers) EMPC = Estimated Maximum Possible Concentration

A = Detection Limit based on signal-to-noise measurement

J = Concentration detected is below the calibration range

B = Less than 10 times higher than method blank level

P = Recovery outside of target range

Nn = Value obtained from additional analysis

LRL = Lower Reporting Limit

I = Interference E = PCDE interference

S = Saturated signal

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

= See Discussion

Report No.....1084865

REPORT OF LABORATORY ANALYSIS



1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612-607-6444

Method 8290 Spike Sample Results

Client - Code Environmental Services

Client's Sample ID Lab Sample ID

Filename **Total Amount Extracted**

ace Analytical

ICAL Date CCal Filename(s) Method Blank ID

ASP-4 COMP-MS 105346506-MS U40226A_14

12.2 g 10/03/2003 U40226A_01 & U40226A_18 BLANK

Matrix Dilution

Extracted

Analyzed

Soil 10

02/23/2004 02/27/2004 02:10

| -4388 | Injected By | BA |
|-------|-------------|----|
| | | |

| Native
Isomers | Qs
(ng) | Qm
(ng) | %
Rec. | Internal
Standards | ng's
Added | Percent
Recovery |
|---|----------------------|-----------------------------|--------------------------|--|------------------------------|----------------------|
| 2,3,7,8-TCDF | 0.20 | 468.95 | 234475 | 2,3,7,8-TCDF-13C
2,3,7,8-TCDD-13C | 2.00 | 69 I
51
57 |
| 2,3,7,8-TCDD | 0.20 | 1.55 | 773 | 1,2,3,7,8-PeCDF-13C
2,3,4,7,8-PeCDF-13C
1,2,3,7,8-PeCDD-13C | 2.00
2.00
2.00 | 74
46 |
| 1,2,3,7,8-PeCDF
2,3,4,7,8-PeCDF | 1.00
1.00 | 256.90
673.95 | 25690
67395 | 1,2,3,4,7,8-HxCDF-13C
1,2,3,6,7,8-HxCDF-13C
2,3,4,6,7,8-HxCDF-13C
1,2,3,7,8,9-HxCDF-13C | 2.00
2.00
2.00
2.00 | 58
46
46
42 |
| 1,2,3,7,8-PeCDD | 1.00 | 3.73 | 373 | 1,2,3,4,7,8-HxCDD-13C
1,2,3,6,7,8-HxCDD-13C
1,2,3,4,6,7,8-HpCDF-13C | 2.00
2.00
2.00
2.00 | 51
52
74
41 |
| 1,2,3,4,7,8-HxCDF
1,2,3,6,7,8-HxCDF
2,3,4,6,7,8-HxCDF | 1.00
1.00
1.00 | 1012.34
183.82
234.37 | 101234
18382
23437 | 1,2,3,4,7,8,9-HpCDF-13C
1,2,3,4,6,7,8-HpCDD-13C
OCDD-13C | 2.00
4.00 | 51
43 |
| 1,2,3,7,8,9-HxCDF | 1.00 | 69.47 | 6947 | 1,2,3,4-TCDD-13C
1,2,3,7,8,9-HxCDD-13C | 2.00 | NA
NA |
| 1,2,3,4,7,8-HxCDD
1,2,3,6,7,8-HxCDD
1,2,3,7,8,9-HxCDD | 1.00
1.00
1.00 | 4.65
7.38
4.11 | 465
738
411 | 2,3,7,8-TCDD-37Cl4 | 0.20 | 64 |
| 1,2,3,4,6,7,8-HpCDF
1,2,3,4,7,8,9-HpCDF | 1.00
1.00 | 615.62
30.84 | 61562
3084 | | | |
| 1,2,3,4,6,7,8-HpCDD | 1.00 | 65.48 | 6548 | | | |
| OCDF | 2.00
2.00 | 425.86
551.31 | 21293
27565 | | | |

Qs = Quantity Splked

Om = Quantity Measured

Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range of 40-135%
X = Background subtracted value

E = PCDE Interference

Nn = Value obtained from additional analysis

NA = Not Applicable

* = See Discussion

Report No..... 1084865

REPORT OF LABORATORY ANALYSIS

Tel: 612-607-1700 Fax: 612-607-6444

Method 8290 Spike Sample Results

Client - Code Environmental Services

Client's Sample ID Lab Sample ID Filename **Total Amount Extracted**

ICAL Date CCal Filename(s) Method Blank ID

ASP-4 COMP-MSD 105346506-MSD U40226A_15

12.3 g 10/03/2003

U40226A_01 & U40226A_18 **BLANK-4388**

Matrix Dilution Extracted

Soil 10 02/23/2004 02/27/2004 02:59

Injected By BAL

Analyzed

| Native
Isomers | Qs
(ng) | Qm
(ng) | %
Rec. | Internal
Standards | ng's
Added | Percent
Recovery | |
|---|----------------------|-----------------------------|--------------------------|--|------------------------------|----------------------|---|
| 2,3,7,8-TCDF | 0.20 | 462.26 | 231132 | 2,3,7,8-TCDF-13C
2,3,7,8-TCDD-13C | 2.00
2.00
2.00 | 84
60
66 | I |
| 2,3,7,8-TCDD | 0.20 | 1.55 | 774 | 1,2,3,7,8-PeCDF-13C
2,3,4,7,8-PeCDF-13C
1,2,3,7,8-PeCDD-13C | 2.00
2.00
2.00
2.00 | 99
58 | 1 |
| 1,2,3,7,8-PeCDF
2,3,4,7,8-PoCDF | 1.00
1.00 | 282.11
674.29 | 28211
67429 | 1,2,3,4,7,8-HxCDF-13C
1,2,3,6,7,8-HxCDF-13C
2,3,4,6,7,8-HxCDF-13C
1,2,3,7,8,9-HxCDF-13C | 2.00
2.00
2.00 | 66
62
57 | |
| 1,2,3,7,8-PeCDD | 1.00 | 4.02 | 402 | 1,2,3,4,7,8-HxCDD-13C
1,2,3,6,7,8-HxCDD-13C
1,2,3,4,6,7,8-HpCDF-13C
1,2,3,4,7,8,9-HpCDF-13C | 2.00
2.00
2.00
2.00 | 67
62
99
53 | ı |
| 1,2,3,4,7,8-HxCDF
1,2,3,6,7,8-HxCDF
2,3,4,6,7,8-HxCDF | 1.00
1.00
1.00 | 1001.25
180.30
242.04 | 100125
18030
24204 | 1,2,3,4,6,7,8-HpCDD-13C
OCDD-13C | 2.00
4.00 | 64
56 | |
| 1,2,3,7,8,9-HxCDF | 1.00 | 71.51 | 7151 | 1,2,3,4-TCDD-13C
1,2,3,7,8,9-HxCDD-13C | 2.00
2.00 | NA
NA | |
| 1,2,3,4,7,8-HxCDD
1,2,3,6,7,8-HxCDD
1,2,3,7,8,9-HxCDD | 1.00
1.00
1.00 | 4.54
8.16
4.49 | 454
816
449 | 2,3,7,8-TCDD-37Cl4 | 0.20 | 65 | |
| 1,2,3,4,6,7,8-HpCDF
1,2,3,4,7,8,9-HpCDF | 1.00 | 595.49
30.33 | 59549
3033 | | | | |
| 1,2,3,4,6,7,8-HpCDD | 1.00 | 66.19 | 6619 | | | | |
| OCDF
OCDD | 2.00
2.00 | 411.36
614.45 | 20568
30723 | | | | |

Qs = Quantity Splked

Qm = Quantity Measured

Rec. = Recovery (Expressed as Percent)

P = Recovery outside of target range of 40-135%

X = Background subtracted value E = PCDE Interference

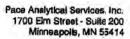
Nn = Value obtained from additional analysis

NA = Not Applicable

* = See Discussion

Report No.....1084865

REPORT OF LABORATORY ANALYSIS



Tel: 612-607-1700 Fax: 612-607-8444



Method 8290 Spike Sample Results

Client - Code Environmental Services

Client Sample ID Lab Sample ID MSID MSD ID

ASP-4 COMP 105346506 105346506-MS 105346506-MSD

Sample Filename MS Filename MSD Filename

U40226A_13 U40226A_14 U40226A_15 Dry Weights Sample Amount

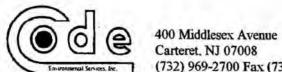
10.0 g 10.0g MS Amount MSD Amount 10.19

| | Sample Conc. | MS/MSD Qs | MS Qm | MSD Qm | | Backgro | und Subtrected | |
|---------------------|--------------|-----------|---------|---------|------|-----------|----------------|-------|
| Analyte | ng/Kg | (ng) | (ng) | (ng) | RPD | MS % Rec. | MSD % Rec. | RPD |
| 2,3,7,8-TCDF | 0.000 | 0.20 | 468.95 | 462.26 | 1.4 | 2479 | 0 | 200.0 |
| 2,3,7,8-TCDD | 135,647 | 0.20 | 1.55 | 1.55 | 0.1 | 94 | 90 | 3.5 |
| 1,2,3,7,8-PeCDF | 27262.554 | 1.00 | 256.90 | 282.11 | 9.4 | 0 | 733 | 200.0 |
| 2,3,4,7,8-PeCDF | 66062,129 | 1.00 | 673.95 | 674.29 | 0.0 | 1190 | 844 | 34.0 |
| 1,2,3,7,8-PeCDD | 0.000 | 1.00 | 3.73 | 4.02 | 7.3 | 113 | 139 | 21.2 |
| 1,2,3,4,7,8-HxCDF | 0.000 | 1.00 | 1012.34 | 1001.25 | 1.1 | 2950 | 1279 | 79.0 |
| 1,2,3,6,7,8-HxCDF | 18444.095 | 1.00 | 183.82 | 180.30 | 1.9 | 0 | 0 | C.0 |
| 2,3,4,6,7,8-HxCDF | 25638.485 | 1.00 | 234.37 | 242.04 | 3.2 | 0 | 0 | C.0 |
| 1,2,3,7,8,9-HxCDF | 7072.719 | 1.00 | 69.47 | 71.51 | 2.9 | Ō | 23 | 200.0 |
| ,2,3,4,7,8-HxCDD | 319,928 | 1.00 | 4.65 | 4.54 | 2.3 | 144 | 132 | 8.8 |
| .2.3.6.7.8-HxCDD | 652,706 | 1.00 | 7.38 | 8.16 | 10.0 | 84 | 158 | 6C.9 |
| 1,2,3,7,8,9-HxCDD | 321,353 | 1.00 | 4.11 | 4.49 | 8.8 | 89 | 126 | 33.7 |
| 1,2,3,4,6,7,8-HpCDF | 55515.865 | 1.00 | 615.62 | 595.49 | 3.3 | 5926 | 3594 | 49.0 |
| 1,2,3,4,7,8,9-HpCDF | 2734.698 | 1.00 | 30.84 | 30.33 | 1.7 | 344 | 276 | 21.8 |
| 1,2,3,4,6,7,8-HpCDD | 5782.167 | 1.00 | 65.48 | 66.19 | 1.1 | 753 | 791 | 4.9 |
| OCDF | 35856,726 | 2.00 | 425.86 | 411.36 | 3.5 | 3326 | 2498 | 28.4 |
| OCDD | 53184.319 | 2.00 | 551.31 | 614.45 | 10.8 | 916 | 3920 | 124.3 |

Definitions

MS = Matrix Spike MSD = Matrix Spike Duplicate Qm = Quantity Measured Qs = Quantity Spiked % Rec. = Parcent Recovery RPD = Relative Percent Difference CDD = Chlorinated dibenzo-p-dioxin CDF = Chlorinated dibenzo-p-furan

T = Tetra Pe = Penta Hx = Hexa Hp = Hepta O = Octa



| | | teret, NJ | | | ine 8, 2004 | 628188 |
|---------------|------------------------|-------------|------------------------------|-----------|-------------|-------------------------|
| Environisen | val Services. Inc. (73 | 2) 969-27 | 00 Fax (732) 969-2701 | ATTENTION | Kelly Fifer | |
| omplete Solui | tions To Your Environm | nental Conc | erns" | RE: | Bayonne B | arrel & Drum |
| de maxim | is, inc. | le. | | | | |
| 186 Cente | er Street, Suite 290 | | W | | | |
| Clinton, N | ew Jersey | | (908) 735-0315 | 1 | | |
| | | | | | | |
| E ARE SENDI | ING YOU F | X Attack | ned Under separate | cover via | | the following items: |
| | Shop drawing | | Prints | Plans | Samples | Specifications |
| | | | | | Oampies | Органичины |
| | Copy of Letter | | Change Order | - | | |
| COPIES | DATE | NO. | | DI | ESCRIPTION | |
| 2 | June 7, 2004 | | Ash Pile 1-4 Waste Profiles. | | | |
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| IESE ARE TR | ANSMITTED as check | red below | | | | |
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| | X For your use | | Approved as noted | | Submit | copies for distributio |
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| | | | Returned for corrections | | Return | corrected prints |
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COPY TO

File

Signed:

de maximis, inc. 186 Center Street, Suite 290 Clinton, NJ 08809 (908) 735-9315

LETTER OF TRANSMITTAL

| T | | | | Attention
RE: | Joe Cosen | T.O. 5. W. | |
|-------------|--|-------------|--|------------------|------------------------|------------------|-----------------|
| | Edison, NJ | 08837 | - | RE: | Bayonne i | Barrel & Drum | |
| E ARE | ESENDING | YOU | ☑ Attached ☐ Under | separate o | over via | the | following items |
| | □ Shop dra | wings | □ Prints □ Plan | ıs 🗆 S | Samples | ☐ Specificati | ions |
| | □ Copy of | letter 🗆 Ch | ange order 🖾 Oth | er - Descri | ption Below | | |
| | COPIES | | DE | ESCRIPTIO | ON | | |
| | 1 | Waste Profi | le - Frac Tank Waste Wate | r · | | | |
| | 1 | Waste Prof | ile - Ash Pile 5 | | | | 11/1 |
| | 1 | Microbiolo | gical Analytical Results - A | ST-006 Sh | ndge | | |
| | 1 | Asbestos A | nalytical Results - Furnace | Mortar | | | |
| | 1 | Analytical | Results Furnace Stack Refr | actory | | | |
| | 1 | Amended A | Asbestos Notification for Bu | ildings 3 & | 8 Roofing | | |
| | | | | | | | |
| For a | pproval
our use | NSMITTED | AS CHECKED BELOW: Approved as submitted Approved as noted | D 5 | Submit | with corrections | |
| For a For y | pproval
our use
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| For a For y | pproval
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our files
eview and c | | ☐ Approved as submitted ☐ Approved as noted | s 01 | Submit
Return corre | copies fo | |



400 Middlesex Avenue Carteret, NJ 07008

628188 May 4, 2004 ATTENTION (732) 969-2700 Fax (732) 969-2701 Kelly Fifer Bayonne Barrel & Drum "Complete Solutions To Your Environmental Concerns" de maximis, inc. 186 Center Street, Suite 290 Clinton, New Jersey (908) 735-0315 WE ARE SENDING YOU the following items: X. Attached Under separate cover via Shop drawings Prints Plans Samples Specifications Copy of Letter Change Order COPIES DATE DESCRIPTION NO. 5/03/04 Waste Profile For Ash Pile #5. THESE ARE TRANSMITTED as checked below. X For approval Approved as submitted Resubmit copies for approval For your use Approved as noted Submit copies for distribution As requested Returned for corrections Return corrected prints For review and comment PRINTS RETURNED AFTER LOAN TO US FOR BIDS DUE REMARKS:

COPY TO

File

Signed:

LETTER OF TRANSMITTAL



400 Middlesex Avenue Carteret, NJ 07008

LETTER OF TRANSMITTAL 03/18/04 8188 ATTENTION (732) 969-2700 Fax (732) 969-2701 **Kelly Fifer** de maximis, inc. 186 Center Street, Suite 290 Clinton, New Jersey (908) 735-9315 WE ARE SENDING YOU X Attached the following items: Under separate cover via Specifications Shop drawings Plans Samples Prints Copy of Letter Change Order COPIES DATE NO. DESCRIPTION Various Copy of Analytical Data To Date February 2004 thru March 18, 2004 THESE ARE TRANSMITTED as checked below: For approval Approved as submitted Resubmit copies for approval X For your use copies for distribution Approved as noted Submit corrected prints As requested Returned for corrections Return For review and comment FOR BIDS DUE PRINTS RETURNED AFTER LOAN TO US 20 REMARKS: COPY TO File Signed:

GO TEST ABORATORIES, INC. • ENVIRONMENTAL TESTING 377 Sheffield Avenue, North Babylon, New York 11703 (631) 422-5777 • FAX (631) 422-5770 • Email: ecotestlab@aol.com



| Client: CODE ENVIRONMENTAL SERVICES | LNC | / Tryleng | atitumine richt doch | AMERS | |
|---|-------------------|-----------|---------------------------|-----------------------------------|--|
| Address: 400 MIDNESEX AVE | | | 73//// | /// | 7 7 |
| CARYERET, NJ 07008 | | | | // / | 0 |
| Phone: 732-969-2700FAX: 732-969-270 | | | 3////// | Accelerated Tuned) Date Recomment | \$ |
| Person receiving report: Tom Tomassetti | | 1.195 | *///// | (If Pegype) Selerated Turnary | 8/ NEED FREESON AMA |
| Sampled by: FRED ANDLAMEN | | V X X 3 | 1///// | 9 9 de 17 | RTO 4 LEDO |
| Source: BAYONINE BARREL AND DRU | n | NA ST | //////8 | Te al | MIN TO FERD |
| Inh No: () 0:00 | I V | 788/ | ///// | 9 9 | |
| MANARA RECONSECUENT | 10 | XXX/ | | / A | |
| ANNERS CONTROLL SAMPLE TO | MA | 33// | 11/1/ | | i indeministration in the contraction of the contra |
| Soil 300 1025 158-1 COMP | 3 XX | 411 | | FAX | RESULTS BY EO, BON |
| Soil 2-18 1:20 ASP-2 comp | 3 2 2 | | | 3- | 5-04 (10 Bus. DAY TAT) |
| Sail 2-18 1:59 ASP - 3 comp | 3 XXX | | | COL | 5-04 (10 Bus. OAY TAT)
DE POST 30005 |
| SOIL 2-19 2 20 ASP-4 comp | 3XX) | | | | |
| Suit 29258 ASD-5 COMP | 13/2/5 | 1 | | | |
| 5016 2-10 11:20 CVA -1. COMP | 3XXX | 1 | | | |
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| | | | | | |
| Relinquished by: (Signature) DATE/TIME SEAL INTACT? Treely (July 2-18) Representing: Copt EN 512 July 4.45 YES NO NA | Received by: (Sig | 17 | inquished by: (Signature) | DATE/TIME | SEAL INTACT? Received by: (Signature) YES NO NA Representing: |
| Relinquished by: (Signature) DATE/TIME SEAL INTACT? | Received by: (Sig | | inquished by: (Signature) | DATE/TIME | SEAL INTACT? Received by: (Signature) |
| Representing: YES NO NA | Representing: | Rep | resenting: | | YES NO NA Representing: |

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 11703 631 422-5777

LAB NO.240597.05

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE:

Bayonne Barrel and Drum, #628188

COLLECTED BY: Client

Bayonne Barrel and Drum. #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D: 1455

MATRIX: Extract SAMPLE: ASP-5 Comp ASP-5 Comp

TCLP

| | T OFFI | | | CVER CE | |
|----------------------------|--------|--------|-------|--------------|------------|
| ANTAL BUTTOAL DAG ANDERSON | | | 22.12 | DATE OF | ANALYTICAL |
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS LRL | METHOD |
| Carbon Tetrachlorids | ug/L | < 1 | | 02/26/04 1 | EPAB260 |
| Chlorobenzone | ug/L | < 1 | | 02/26/04 1 | EPA8260 |
| Chloroform | ug/L | < 1 | | 02/26/04 1 | EPA8260 |
| 1,4 Dichlorobenzene (v) | ug/L | < 1 | | 02/26/04 1 | EPA8260 |
| 1.2 Dichloruethane | ug/L | < 1 | | 02/26/04 1 | EPAB260 |
| 1.1 Dichloroethene | ug/L | < 1 | | 02/26/04 1 | EPA8260 |
| Methyl Ethyl Ketone | ug/L | < 10 | | 02/26/04 10 | EPA8260 |
| Tetrachloroethene | ug/L | < 1 | | 02/26/04 1 | EPA8260 |
| Trichloroethylene | ug/L | < 1 | | 02/26/04 1 | EPAB260 |
| Vinyl Chloride | ug/L | < 1 | | 02/26/04 1 | EPA8260 |
| Tenzene | ug/L | < 1 | | 02/26/04 1 | EPA8260 |
| TCLP Zero Headspace Extra | act | | | 02/19/04 | EPA1311 |

oc:

LRL=laboratory Reporting Limit

REMARKS:

0

DIRECTOR

Page of 12

NYSDOH ID # 10320

EcoTest Laboratories 377 Sheffield Ave North Babylon, NY 631 422-5777 Inc 11703

LAR NO. 240597.05

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: SOURCE OF SAMPLE:

Bayonne Barrel and Drum, #628188
Bayonne Barrel and Drum. #628188
Client DATE COL'D:02/18/04 RECEIVED:02/19/04

COLLECTED BY:

TIME COL'D:1455

MATRIX: Extract SAMPLE: ASP-5 Comp

ASP-5 Comp

TCLP

| | 1 ATI | | | | | |
|------------------------------|-------|--------|------|------------|-----|------------|
| ANTAL UNITALL IN LO ANIMANDA | | | | DATE OF | 225 | ANALYTICAL |
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | | LRL | METHOD |
| Lindane | ug/L | < 0.5 | | 03/01/04 0 | | EPA8081 |
| Endrin | ug/L | < 0.5 | | 03/01/04 0 | 1.5 | EPA8081 |
| Methoxychlor | ug/L | < 1 | | 03/01/04 1 | 100 | EPA6081 |
| Toxaphene | ug/L | < 10 | | 03/01/04 1 | 0 | EPA8081 |
| Chlordane | ug/L | < 2 | | 03/01/04 2 | 2 | EPA8081 |
| Heptachlor | ug/L | < 0.5 | | | 1.5 | EPA8081 |
| Heptachlor Epoxide | ug/L | < 0.5 | | 03/01/04 0 | .5 | EPA8081 |
| 2,4-D | ug/L | < 1 | | 02/29/04 1 | | EPA8151 |
| 2,4,5-TP | ug/L | < 0.5 | | 02/29/04 0 | | EPA8151 |
| 2-Methylphenol (o-cresol) | ng/L | < 10 | | 02/25/04 1 | 0 | EPA8270 |
| 1-Methylphenol (m-cresol) | ug/L | < 10 | | 02/25/04 1 | 0 | EPA8270 |
| 4-Methylphenol (p-cresol) | ug/L | < 10 | | 02/25/04 1 | 10 | EPA8270 |
| Pentachlorophenol (ms) | ug/L | < 100 | | 02/25/04 1 | LDO | EPA8270 |
| 2,4,5-Trichlorophenol | ug/L | < 10 | | 02/25/04 1 | 10 | EPA8270 |
| 2,4,6-Trichlorophenol | ug/L | < 10 | | 02/25/04 1 | 10 | EPA8270 |
| 2,4-Dinitrotoluene | ug/L | < 10 | | 02/25/04 1 | 10 | EPA8270 |
| Hexachlorobenzene | ug/L | < 10 | | 02/25/04 1 | 10 | EPA8270 |
| Hexachlorobutadiene | ug/L | < 10 | | | 10 | EPA8270 |
| Hexachloroethane | ug/L | < 10 | 19.5 | 02/25/04 1 | 10 | EPA8270 |
| Nitrobenzene | ug/L | < 10 | | | 10 | EPA8270 |
| Pyridine | ug/L | < 10 | | | 10 | EPA8270 |
| | | | | | | |

TCLP Extraction

02/19/04

EPA1911

cc:

LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

DIRECTOR

2 Page

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 11703 631 422-5777

LAB NO.240597.05

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE:

Bayonne Barrel and Drum, #628188

SOURCE OF SAMPLE: COLLECTED BY:

Bayonne Barrel and Drum, #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D: 1455

MATRIX: Extract SAMPLE: ASP-5 Comp ASP-5 Comp

TCLP

| AND THE RESIDENCE OF THE PARTY | | | | DATE OF | ANALYTICAL | |
|---|-------|---------|------|----------------|------------|--|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS LRL | METHOD | |
| Arsenic as As | mg/L | < 0.1 | | 03/01/04 0.1 | EPA6010 | |
| Barium as Ba | mg/L | 0.089 | | 03/01/04 0.05 | EPA6010 | |
| Cadmium as Cd | mg/L | 0.5 | | 03/01/04 0.05 | EPA6010 | |
| Chromium as Cr | mg/L | < 0.05 | | 03/01/04 0.05 | EPA6010 | |
| Lead as Pb | mg/L | 3.1 | | 03/01/04 0.05 | EPA6010 | |
| Mercury as Hg | mg/L | < 0.001 | | 02/24/04 0.001 | EPA7470A | |
| Selenium as Se | mg/L | < 0.1 | | 03/01/04 0.1 | EPA6010 | |
| Silver as Ag | mg/L | < 0.05 | | 03/01/04 0.05 | EPA6010 | |
| TCLP Extraction | | | | 02/19/04 | EPA1311 | |
| | | | | | | |

letals, QCQA

cc:

LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

DIRECTOR

Page 3 of 12

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 1176 631 422-5777 11703

LAB NO.240597.05

03/04/04

Code Environmental Services. Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
CULLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D: 1455

MATRIX: Soil

SAMPLE: ASP-5 Comp ASP-5 Comp Results

DIRECTOR

| | Re | sults repo | rted on a dry weig | ht bas | g |
|------------------------|---------------|------------|--------------------|--------|------------|
| | | | DATE OF | | ANALYTICAL |
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG ANALYSIS | LRL | METHOD |
| Dichlordifluoromethane | ug/Kg | < 13 | 03/03/04 | | |
| Chloromethane | ug/Kg | < 13 | 03/03/04 | | |
| Vinyl Chloride | ug/Kg | < 13 | 03/03/04 | | |
| Bromomethane | ug/Kg | < 13 | 03/03/04 | | |
| Chloroethane | ug/Kg | < 13 | 03/03/04 | | |
| Trichlorofluoromethane | ug/Kg | < 13 | 03/03/04 | | |
| 1,1 Dichloroethene | ug/Kg | < 13 | 03/03/04 | | |
| Methylene Chloride | ug/Kg | < 13 | 03/03/04 | | |
| t-1,2-Dichloroethene | ug/Kg | < 13 | 03/03/04 | | |
| 1,1 Dichloroethane | ug/Kg | < 13 | 03/03/04 | | |
| .2-Dichloropropane | ug/Kg | < 13 | 03/03/04 | | |
| c-1,2-Dichloroethene | ug/Kg | < 13 | 03/03/04 | | |
| Bromoch) cromethane | ug/Kg | < 13 | 03/03/04 | | |
| Chloroform | ug/Kg | < 13 | 03/03/04 | | |
| 111 Trichloroethane | ug/Kg | < 13 | 03/03/04 | | |
| Carbon Tetrachloride | ug/Kg | < 13 | 03/03/04 | 12.820 | EPA8260 |
| 1.1-Dichloropropene | ug/Kg | < 13 | 03/03/04 | | |
| Benzene | ug/Kg | 53 | 03/03/04 | | |
| 1,2 Dichloroethane | ug/Kg | < 13 | 03/03/04 | | |
| Trichloroethylene | ug/Kg | < 13 | 03/03/04 | | |
| 1,2 Dichloropropane | ug/Kg | < 13 | 03/03/04 | 12.820 | EPA0260 |
| Dibromomethane | ng/Kg | < 13 | 03/03/04 | 12.820 | EPA8260 |
| Bromodichloromethane | ug/Kg | < 13 | 03/03/04 | | |
| c-1,3Dichloropropene | ug/Kg | < 13 | 03/03/04 | 12.820 | EPA8260 |
| Toluene | ug/Kg | 680 | 03/03/04 | 12.820 | EPA8260 |
| co: | 7 X = 3 X 2 4 | | | 4.00 | |
| | | | | | |

LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

Page

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, NY 631 422-5777 11703

LAB NO.240597.05

03/04/04

Code Environmental Services. Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1455

MATRIX: Soil

SAMPLE: ASP-5 Comp ASP-5 Comp

Results reported on a dry weight basis

| | A. | source rebo | tred on a dry wer! | THE DOS | |
|--------------------------------------|--------|-------------|--------------------|---------|------------|
| Variable in the second of the second | | | DATE OF | | ANALYTICAL |
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG ANALYSIS | LRL | METHOD |
| t-1,3Dichloropropene | ug/Kg | < 13 | 03/03/04 | 12.820 | EPA8260 |
| 112 Trichloroethane | ug/Kg | < 13 | 03/03/04 | | |
| Tetrachloroethene | ug/Kg | 280 | 03/03/04 | | |
| 1,3-Dichloropropane | UE/KE | < 13 | 03/03/04 | | |
| Chlorodibromomethane | ug/Kg | < 13 | 03/03/04 | | |
| 1.2 Dibromoethane | ug/Kg | < 13 | 03/03/04 | | |
| Chlorobenzene | ug/Kg | < 13 | 03/03/04 | | |
| Ethyl Benzene | ug/Kg | 420 | 03/03/04 | | |
| 1112Tetrachloroethane | ug/Kg | < 13 | 03/03/04 | | |
| m + p Xylene | ug/Kg | 220 | 03/03/04 | 25.641 | EPA8260 |
| Xylene | ug/Kg | 900 | 03/03/04 | | |
| Styrene | ug/Kg | 79 | 03/03/04 | | |
| Bromoform | ug/Kg | < 13 | 03/03/04 | | |
| Isopropylbenzene | ug/Kg | 96 | 03/03/04 | 12.820 | EPA8260 |
| Bromobenzene | ug/Kg | < 13 | 03/03/04 | | |
| 1122Tetrachloroothane | ng/Kg | < 13 | 03/03/04 | | |
| 123-Trichloropropane | ug/Kg | < 13 | 03/03/04 | | |
| n-Propylbenzene | ug/Kg | 170 | 03/03/04 | | |
| 2-Chlorotoluene | ug/Kg | < 13 | 03/03/04 | | |
| 135-Trimethylbenzene | ug/Kg | 330 | 03/03/04 | | |
| 4-Chlorotoluene | ug/Kg | < 13 | 03/03/04 | | |
| tert-Butylbenzene | ug/Kg | < 13 | 03/03/04 | | |
| 124-Trimethylbenzene | ug/Kg | 100 | 03/03/04 | | |
| sec-Butylbenzene | ug/Kg | 27 | 03/03/04 | | |
| p-Jsopropyltoluene | ug/Kg | < 13 | 03/03/04 | | |
| oc: | -0,-10 | 3.2 | F277 277 13 | | |
| 75.00 | | | | | |

LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

Page 5

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 631 422-5777 11703

LAB NO.240597.05

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE:

Bayonne Barrel and Drum, #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04 COLLECTED BY:

TIME COL'D: 1455

MATRIX: Soil SAMPLE: ASP-5 Comp

ASP-5 Comp

Results reported on a dry weight basis ANALYTICAL DATE OF ANALYTICAL PARAMETERS UNITS RESULT FLAG ANALYSIS LRL METHOD 1.3 Dichlorobenzane (v) 03/03/04 12.820 EPA8260 ug/Kg < 13 03/03/04 12.820 EPA8260 1.4 Dichlorobenzene (v) ug/Kg < 13 n-Butylbenzene ug/Kg < 13 03/03/04 12.820 EPA8260 1,2 Dichlorobenzene (v) ug/Kg < 13 03/03/04 12.820 EPA8260 Dibromochloropropane 03/03/04 12.820 EPA8260 < 13 ug/Kg 124-Trichlorobenzene (v) < 13 03/03/04 12.820 EPA8260 ug/Kg Hexachlorobutadiene < 13 03/03/04 12.820 EPA8260 ug/Kg Naphthalene(v) ug/Kg 1.00 03/03/04 12.820 EPA8260 123-Trichlorobenzene ug/Kg < 13 03/03/04 12.820 EPA8260 03/03/04 12.820 EPA8260 ter. ButylMethylEther < 13 ug/Kg -Ethyltoluene 290 03/03/04 12.820 EPA8260 ug/Kg 03/03/04 12.820 EPA8260 reon 113 ug/Kg < 13 03/03/04 12.820 EPA8260 03/03/04 128.20 EPA8260 1245 Tetramethylbenz 400 ug/Kg Acetone < 130 ug/Kg Methyl Ethyl Ketone 03/03/04 128.20 EPA8260 < 130 ug/Kg Methylisobutylketone ug/Kg < 130 03/03/04 128.20 EPA8260 Chlorodifluoromethane ug/Kg < 13 03/03/04 12.820 EPA8260 p Diethylbenzene < 13 03/03/04 12.820 EPA8260 ug/Kg MS Library Search (Vol) Library Search, VOC K Sollds 78 02/20/04 0.1 SM182540G VOC QCQA

oc:

LRL=laboratory Reporting Limit

REMARKS: Library Search Is attached.

of 12 Page

DIRECTOR

NYSDOH ID # 10320

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 11703 631 422-5777

LAB NO.240597.05

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE: Bayonne Barrel and Drum. #628188

RCE OF SAMPLE: Bayonne Barrel and Drum. #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D:1455

MATRIX: Soil SAMPLE: ASP-5 Comp

ASP-5 Comp

Results reported on a dry weight basis DATE UF A ANALYTICAL ANALYTICAL PARAMETERS UNITS RESULT METHOD FLAG ANALYSIS LRL N-Nitrosodimethylamine ug/Kg < 770 03/03/04 769.23 EPAB270 < 770 Ris(2-chloroethyl)ether 03/03/04 769.23 EPA8270 ug/Kg 1,3 Dichlorobenzene(sv) < 770 03/03/04 769.23 EPA8270 ug/Kg 1,4 Dichlorobenzene(ev) < 770 769.23 EPA8270 ug/Kg 03/03/04 1.2 Dichlorobenzene(sv) 03/03/04 769.23 EPA8270 ug/Kg < 770 Bis(2-chloroisopropyl)ether < 770 03/03/04 769.23 EPA8270 ug/Kg N-Nitrosodi-n-propylamine ug/Kg < 770 03/03/04 769.23 EPA8270 Hexachloroethane ug/Kg < 770 03/03/04 769.23 EPA8270 Nitrobenzene ug/Kg < 770 03/03/04 769.23 EPA8270 Isophorone 2400 ug/Kg 03/03/04 769.23 EPA82/0 is(2-chloroethoxy)methane < 770 03/03/04 769.23 EPA8270 ug/Kg .24-Trichlorobenzene (sv) < 770 03/03/04 769.23 EPA8270 ug/Kg Naphthalene(sv) 7900 03/03/04 769.23 EPA8270 ug/Kg Hexachlorobutadiene < 770 03/03/04 769.23 EPA8270 ug/Kg Hexachlorocyclopentadiene < 7700 03/03/04 7692.3 EPA8270 ug/Kg 2-Chloronaphthalene < 770 03/03/04 769.23 BPA8270 ug/Kg Dimethyl Phthalate < 770 03/03/04 769.23 EPA8270 ug/Kg Acenaphthylene ug/Kg 1000 03/03/04 769.23 EPA8270 2.6-Dinitrotoluene ug/Kg < 770 03/03/04 769.23 EPA8270 Agenaphthene < 770 ug/Kg 03/03/04 769.23 EPA8270 2,4-Dinitrotoluene Diethyl Phthalate < 770 03/03/04 769.23 EPA8270 ug/KR ug/Kg < 770 03/03/04 769.23 EPA8270 03/03/04 769.23 EPA8270 luorene 960 ug/Kg

< 770

< 770

LRL=laboratory Reporting Limit

Page

03/03/04 769.23 EPA8270

03/03/04 769.23 EPA8270

REMARKS:

cc:

-Chlorophenyl phenyl ether ug/Kg

DIRECTOR

of 12

NYSDOH ID # 10320

ug/Kg

rn = 5337

V-Nitrosodiphenylamine

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon. 631 422-5777 NY 11703

LAB NO.240597.05

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE:

Bayonne Barrel and Drum, #628188

SOURCE OF SAMPLE: COLLECTED BY:

Bayonne Barrel and Drum, #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D: 1455

MATRIX: Soil

SAMPLE: ASP-5 Comp ASP-5 Comp

Results reported on a dry weight basis DATE OF A ANALYTICAL ANALYTICAL PARAMETERS FLAG ANALYSIS LRL UNITS RESULT METHOD 03/03/04 769.23 EPA8270 1.2-Diphenylhydrazine < 770 ug/Kg 4-Bromophenyl phenyl ether 03/03/04 769.23 EPA8270 ug/Kg < 7/0 03/03/04 769.23 EPA8270 03/03/04 769.23 EPA8270 03/03/04 769.23 EPA8270 < 770 Hexachlorobenzene ug/Kg Phenanthrene 7700 ug/Kg ug/Kg Anthracene 1700 Di-n-Butyl Phthalate ug/Kg 8700 03/03/04 769.23 EPA8270 03/03/04 769.23 BPA8270 Fluoranthene ug/Kg 6000 Benzidine < 7700 03/03/04 7692.3 EPAB270 ug/Kg D3/03/04 769.23 EPA8270 D3/03/04 769.23 EPA8270 D3/03/04 769.23 EPA8270 D3/03/04 769.23 EPA8270 D3/03/04 7692.3 EPA8270 Pyrene 15000 * ug/Kg BenzylButylPhthalate 9100 ug/Kg enzo(a)anthracene 5000 4 ug/Kg 3,3'-Dichlorobenzidine ** ug/Kg < 7700 6400 Chrysene ug/Kg 03/03/04 769.23 EPA8270 Bis(2-ethylhexyl)phthalate ug/Kg 63000 Di-n-octyl Phthalate ug/Kg 1800 ** 03/03/04 769.23 EPA8270 Benzo(b)fluoranthene #** 03/03/04 769.23 EPA8270 ug/Kg 4200 Benzo(k)fluoranthene #** 03/03/04 769.23 EPA8270 ug/Kg 4200 03/03/04 769.23 EPA8270 03/03/04 769.23 EPA8270 03/03/04 769.23 EPA8270 03/03/04 769.23 EPA8270 Benzo(a)pyrene ** ug/Kg 4200 Indeno(1,2,3-cd)pyrene ** ug/Kg 2800 Dibenzo(a,h)anthracene 790 ** ug/Kg 火火 Benzo(ghi)perylene ug/Kg 4600

Base Neutrals QAQC MS Library Search (BN)

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LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

*.**Estimated due to low internal standard recovery. *38% & **20%. Low recovery due to interference. QC limit is 50%. #Total = 8400 ug/Kg, unable to separate isomers.

DIRECTOR

6f 12 Page

NYSDOH ID # 10320

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 631 422-5777 11703

LAB NO.240597.05

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue

Carteret, NJ 07008 ATTN: Tom Tomassetti

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04

TIME COL'D: 1455

MATRIX: Soil

SAMPLE: ASP-5 Comp ASP-5 Comp

Results reported on a dry weight basis

| | | | | DATE OF | ANALYTICAL |
|----------------------------|-------|--------|--------|-----------------|------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS LRL | METHOD |
| Phenol | ug/Kg | 1000 | W-1045 | 03/03/04 769.23 | EPA8270 |
| 2-Chlorophenol | ug/Kg | < 770 | | 03/03/04 769.23 | EPA8270 |
| 2-Nitrophenol | ug/Kg | < 770 | | 03/03/04 769.23 | EPA8270 |
| 2,4-Dimethylphenol | ug/Kg | < 770 | | 03/03/04 769.23 | EPA8270 |
| 2,4-Dichlorophenol | ug/Kg | < 770 | | 03/03/04 769.23 | EPA8270 |
| 4-Chloro-3-methylphenol | ug/Kg | < 770 | | 03/03/04 769.23 | EPA8270 |
| 2,4,5-Trichlorophenol | ug/Kg | < 770 | | 03/03/04 769.23 | EPA8270 |
| 4-Nitrophenol | ug/Kg | < 7700 | | 03/03/04 7692.3 | |
| 2,4-Dinitrophenol | ug/Kg | < 7700 | | 03/03/04 7692.3 | EPAB270 |
| 2-Methyl-4,6-dinitrophenol | ug/Kg | < 7700 | | 03/03/04 7692.3 | |
| "entachlorophenol (ms) | ug/Kg | < 7700 | | 03/03/04 7692.3 | EPA8270 |

MS Library Search (AE)

Acid Ex. QAQC

co:

LRL=laboratory Reporting Limit

REMARKS: Library Search is attached.

DIRECTOR

Page

NYSDOH ID # 10320

EcoTest Laboratories 377 Sheffield Ave Inc North Babylon, NY 631 422-5777 11703

LAB NO.240597.05

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti ATTN:

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE:

Bayonne Barrel and Drum, #628188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04 COLLECTED BY: Client

TIME COL'D:1455

MATRIX: Soil

SAMPLE: ASP-5 Comp ASP-5 Comp

Results reported on a dry weight basis

DIRECTOR

| A Not ten in the property of the second | | | | DATE OF | | ANALYTICAL | |
|---|-------|--------|------|----------|--------|------------|--|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD | |
| Antimony as Sb | mg/Kg | 12 | | 03/01/04 | 6.4102 | EPA6010 | |
| Arsenic as As | mg/Kg | 44 | | 03/01/04 | | | |
| Beryllium as Be | mg/Kg | < 0.64 | | 03/01/04 | 0.6410 | EPA6010 | |
| Cadmium as Cd | mg/Kg | 68 | | 03/01/04 | 3.2051 | EPA6010 | |
| Chromium as Gr | mg/Kg | 2200 | | 03/01/04 | | | |
| Copper as Cu | mg/Kg | 1100 | | 03/01/04 | 6.4102 | EPA6010 | |
| Lead as Pb | mg/Kg | 7300 | | 03/01/04 | | | |
| Mercury as Hg | mg/Kg | 8.7 | | 02/24/04 | 0.5128 | EPA747QA | |
| Nickel as Ni | mg/Kg | 150 | | 03/01/04 | 6.4102 | EPA6010 | |
| Selenium as Se | mg/Kg | 9.6 | | 03/02/04 | 1.2820 | EPA7740 | |
| Tilver as Ag | mg/Kg | 2.8 | | 03/03/04 | 0.7179 | EPA7760A | |
| ballium as Tl | mg/Kg | < 6.4 | | 03/01/04 | | | |
| Zinc as Zn
Metals, QCQA | mg/Kg | 4100 | | 03/01/04 | | | |

cc:

LRL=laboratory Reporting Limit

REMARKS:

Page 10

NYSDOH ID # 10320

5314225770 03/04/2024 15:24

EcoTest Laboratories 377 Sheffield Ave North Babylon, NY 631 422-5777 11703

LAB NO. 240597.05

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

Tom Tomassetti ATTN:

PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188 SOURCE OF SAMPLE:

Bayonne Barrel and Drum. #528188 Client DATE COL'D:02/18/04 RECEIVED:02/19/04 COLLECTED BY: Client

TIME COL'D:1455

MATRIX: Soil

SAMPLE: ASP-5 Comp ASP-5 Comp

Results reported on a dry weight basis

DIRECTOR

| | | | | DATE OF | | ANALYTICAL |
|-----------------------|-------|--------|------|----------|--------|------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | LRL | METHOD |
| Lindane | ug/Kg | < 64 | | 03/02/04 | 64.102 | EPA8081 |
| | ug/Kg | < 64 | | 03/02/04 | 64.102 | EPA8081 |
| Aldrin | ug/Kg | < 64 | | 03/02/04 | 64.102 | EPA8081 |
| Heptachlor Epoxide | ug/Kg | < 64 | | 03/02/04 | 64.102 | EPA8081 |
| | ug/Kg | 1800 | | 03/02/04 | 64.102 | BPA8081 |
| | ug/Kg | < 64 | | 03/03/04 | | |
| | ug/Kg | < 64 | | 03/03/04 | | |
| p.p-DDD | ug/Kg | 1100 | | 03/02/04 | | |
| | ug/Kg | < 130 | | 03/02/04 | 128.20 | EPA8081 |
| | ug/Kg | < 260 | | 03/02/04 | | |
| | ug/Kg | < 1300 | | 03/02/04 | | |
| | ug/Kg | < 380 | | 03/03/04 | | |
| | ug/Kg | < 64 | | 03/02/04 | | |
| | ug/Kg | < 64 | | 03/02/04 | | |
| | ug/Kg | < 64 | | 03/02/04 | | |
| Endosulfan 1 | ug/Kg | < 130 | | 03/02/04 | 128.20 | EPA8081 |

cc:

LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

EcoTest Laboratories Inc 377 Sheffield Ave North Babylon, NY 631 422-5777 11703

LAB NO. 240597.05

03/04/04

Code Environmental Services, Inc.

400 Middlesex Avenue Carteret, NJ 07008

ATTN: Tom Tomassetti PO#:

SOURCE OF SAMPLE: Bayonne Barrel and Drum, #628188
SOURCE OF SAMPLE: Bayonne Barrel and Drum. #628188
COLLECTED BY: Client DATE COL'D:02/18/04 RECEIVED:02/19/04
TIME COL'D:1455

MATRIX: Soil SAMPLE: ASP-5 Comp ASP-5 Comp

Results reported on a dry weight basis

| | | | | DATE OF | | ANALYTICAL |
|--------------------------|-------|---------|----------|----------|--------|-------------------|
| ANALYTICAL PARAMETERS | UNITS | RESULT | FLAG | ANALYSIS | | |
| Endosulfan 2 | ug/Kg | < 130 | 5 351815 | 03/04/04 | | |
| Endosulfan Sulfate | | < 380 | | 03/04/04 | | |
| Pest QAQC | | | | | | |
| Aroclor 1016 | ug/Kg | < 64000 | | 03/03/04 | 64102. | EPA8082 |
| Aroclor 1221 | ug/Kg | < 64000 | | 03/03/04 | 64102. | EPA8082 |
| Aroclor 1232 | ug/Kg | < 64D00 | | 03/03/04 | 64102. | EPABOB2 |
| Aroclor 1242 | ug/Kg | < 64000 | | 03/03/04 | 64102. | EPA8082 |
| Aroclor 1248 | | 450,000 | | 03/03/04 | 64102. | EPA8082 |
| Aroclor 1254 | ug/Kg | < 64000 | 1.2 | 03/03/04 | 64102. | EPA8082 |
| Aroclor 1260
est QAQC | ug/Kg | < 64000 | | 03/03/04 | 64102. | EPA8082 |
| Jyanide as CN | mg/Kg | 10 | | 02/25/04 | 2.5641 | EPA335.3 |
| Phenols as Phenol | mg/Kg | | | | | EPA420.1 |
| Reactive cyanide | mg/Kg | < 2.6 | | | | EPA335.4 |
| Sulfide as S | mg/Kg | | | | | EPA376.2 |
| pH (lab) units | | 7.3 | | | | EPA9045C |
| Flash Point deg C | | > 100 | | 02/23/04 | 25 | EPA1010 |
| Quality Control | | | | | | the second second |

cc:

LRL=laboratory Reporting Limit

REMARKS:

NYSDOH ID # 10320

of 12

| | | 16 | a de la casa de la cas | SAMPLE NO. | |
|----------------------|-------------|---|--|----------------|---|
| | | VOLATILE ORGANICS ANALYSIS D.
TENTATIVELY IDENTIFIED COM | | 240597.05 | 4 |
| Lab Name: ECOTE | ST LABS | Contract: | | | |
| Project No.: | | Site: Location: | | Graup: | |
| Matrix: (soil/water) | Soil | _ | Lab Sample II | 240597.05 | |
| Sample wt/vol: | 0.5 | (g/mL) g | Lab File II | 03030432.D | |
| Level: (low/med) | Low | | Date Received | d: 2/19/04 | |
| % Solid: | 78 | | Date Analyzed | 1: 3/4/04 | |
| GC Column: | MXT-624 | ID: 0.53 (mm) | Dilution Facto | - | |
| Soil Extract Volume: | | (mL) | Soil Aliquet Volume | A | |
| Sun Extract Volume. | - | | CON ANGLES VOIGIN | - laci | |
| Number TICs found: | | Concentration (ug/L or u | | | |
| | CAS Number | Compound Name | RT Est. Conc. | 1 0 | |
| | 1. 108-87-2 | Cyclohexane, methyl- | 9.64 68 | 1 | |
| | 2. | Unknown Hydrogerbon | 16.83 74 | 3 | |
| | 3. 820-14-4 | Benzene, 1-ethyl-3-methyl- | 18.07 100 | 100000 | |
| | 4. | Unknown Hydrocarbon | 19.58 130 | _ J | |
| | 5. 934-80-5 | Benzene,4-sthyl-1,2-dimethyl- | 20.41 360 | J | |
| | 6, B74-35-1 | 1H-Indene, 2,3-dihydro-5-meth | 22.00 130 | J | |
| | 7. | | | | |
| | 8. | | | | |
| | 9. | | | - | |
| | 11. | + | | | |
| | 12. | | | | |
| | 13. | | | | |
| 10 41 | 14. | | | 5 (FE 30) (CV) | |
| | 15. | | | | |
| 19 | 16. | | | | |
| | 17. | | | | |
| | 18. | | | | |
| | 20. | | - | - | |
| 0.4 | 21. | | | | |
| - 1 | 22. | | | | |
| | 23. | | | | |
| | 24. | | | | |
| | 25. | | | | |
| A. | 26. | | | | |
| | 27. | | | 21 | |
| | 28. | | | | |
| | 29. | | | | |
| | 30. | | حسبب احتبا | | |

1F SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

| _ | | | NO | ÷ |
|---|-----|-----|------|---|
| | 245 | 059 | 7.05 | |

| Lab Name: ECOTEST | LABS | | | Contract: | | 144 |
|------------------------|----------|--------|-------------|-----------------------------|------------------|-----------|
| Project No.: | 2 76 | Site | : | Location: | | Group: |
| Matrix: (soil/water) | SOIL | | | | Lab Sample ID: | 597.05 |
| Sample wt/vol: | DILUTION | (g/mL) | | | Lab File ID: | 3030414.D |
| Level: (low/med) | LOW | | | | Date Received: | 2/19/04 |
| % Moisture; | | deca | nted: (Y/N) | | Date Extracted: | 2/27/04 |
| Concentrated Extract V | olume: | 1000 | (uL) | | Date Analyzed: | 3/3/04 |
| Injection Volume: | 1.0 | (UL) | | | Dilution Factor: | 600.0 |
| GPC Cleanup: (Y/N) | | _ | pH: | | | |
| Number TICs found: | 12 | | C | oncentration
(ug/L or ug | | |

| CAS Number | Compound Name | RT | Est. Conc. | Q |
|----------------|------------------------------|-------|------------|-------|
| 1. 108-88-3 | Toluene | 4.01 | 9700 | J |
| 2. 123-42-2 | 2-Pentanone, 4-hydroxy-4-met | 4.53 | 110000 | 1 |
| 3. 95-47-8 | Senzene, 1,2-dimethyl- | 4.74 | 15000 | J |
| 4. 104-76-7 | 1-Hexanol, 2-ethyl- | 6.17 | 16000 | J |
| 5. 85-44-9 | Phthalic anhydride | 6.36 | 5000 | 1 |
| 6. 18001-14-4 | Benzoic acid, 2-((trimethyls | 10.95 | 3000 | J |
| 7. 832-71-3 | Phenanthrens, 3-methyl- | 11.79 | | 1 |
| 8. 26914-33-0 | 1,1'-Biphanyl, tatrachloro- | 11.94 | 5800 | J |
| 9. 15968-05-5 | 1,1'-Biphenyl, 2,2',8,6'-tet | 12.20 | 6600 | J |
| 10, 52663-58-8 | 1,1'-Biphenyl, 2,3,4',6-tetr | 12.36 | 4800 | J |
| 11. 41464-49-7 | | 12.72 | 5700 | J |
| 12. 41464-46-4 | | 12.76 | 8100 | J |
| 13. | | | | Til |
| 14. | | - | | |
| 15, | | 2.4 | | |
| 16. | | J . | - | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | 1 | 10.10 |
| 20. | | - | V | |
| 21. | | | | 1.5 |
| 22 | | - | | 1 |
| 23. | | - | | |
| 24. | | | | |
| 25. | | | | |
| 20. | | | | |
| 27. | | | | |
| 28. | | 1 | | |
| 29. | | | - | CT |
| 30. | | | | |

CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately

| / Pace Analytical | Territory 2 | Page: / of / | | |
|--|--|--|--|------------------|
| Required Client Information: Section A | Regulard Client Information: Section B | Client Information (Check quote/contract): | To 8e Completed by Pace Analytical Client' S | lection C |
| Company CODE ENVIRON. S.JO. 3 | TAK TOM TOMASSETT | Requested Due Date: 3-5-04 | Quote Reference: MSP05004 | |
| Address: 400 MIDDLESEX AVE. | COPY TO: CODE ENU. SULT, INC | TAT: 10 BUS. DAYS | Project Manager: | |
| CARTEDET NOT 0700 | 8 Invoice To: CODE ENV. SUCS INC | * Turn around dates less then 14 days subject | Project #: | |
| CARTERET, NJ 0700; | P.O. 30004 | suboratory and contractual obligations and may | Profile #: 1084865 | |
| 1)2 16/2/20 172 16/2/21 | Project Name: BAYONNE BAFFEL | in a Rush Timmround Burcharge | 1201000 | |
| * | Project Number: 6 28188 | Turn Around Time (TAT) in calender tays. | | |
| Required Client Information: Section D | Valid Matrix Codes | Preservatives (1) | Requested Analysis | |
| SAMPLE ID (One charater p | Matrix Code TV B | TIME COLLECTED S CONTENES Lippingeevel NECHOLOGI NE | | REMARKS / Leb ID |
| ASP-7 COMP | 962-18-4 | 10:25 1 X | | 5346472 |
| 050-2 6048 | 562-145-0 | | | 1 480 |
| ASP-3 COMP | 56 2-18-0 | 11111111111111 | | 409 |
| | 5/ 2-18:04 | 2.20 1X | | 1 106 |
| ASP-4 COMP | | | | 514 |
| ASP-5 COMP | 5/2-18-4 | | | 1 522 |
| CYA-1 COMP | SL 2-18-00 | 11:20 1 X | | V SOU |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| DIRPMENT MENTOD MELLING S | IMPPING DATE NO DECOLERS ITEM# | REFENOUSS FORTY FATTERATION | DATE TIME AUGUSTE BY INT | LIATON DATE TIME |
| U15 Pin 3539 | | Fredal Clost Laws | 48.47 1010年 | DE-1403 |
| SAMPLE CONDITION: SAMPLE NOTES: | The state of the s | | | |
| Tempin C | as Tem & World | | | |
| Received on los Y/N | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | |
| Sealed Cooler Y (N / | | IAME AND SIGNATURE | Same of the same | |
| Semple Intact YYN | | O O SAMPLER: FRED ERICK ANDL | AWER | |
| Additional Comments: | SIGNATURE | E OF SAMPLER TERED ERICK ANDLY | lange | DATE Signed 4 |



Tel: 012-607-1700 Fax: 612-607-6444

Method 8290 Blank Analysis Results

Client - Code Environmental Services

Lab Sample ID Filename Total Amount Extracted ICAL Date CCal Filename(s)

BLANK-4388 U40225A_11 20.0 g 10/03/2003 U40225A_08 & U40225A_23

Matrix Dilution Extracted Analyzed

Solid 02/23/2004

Injected By

02/25/2004 17:01

| $\overline{}$ | | _ | • |
|---------------|----|---|---|
| • | ΝЛ | | |

| Native
Isomers | Conc
ng/Kg | EMPC
ng/Kg | LRL
ng/Kg | Internal
Standards | ng's
Added | Percent
Recovery | |
|--------------------------------|---------------|---------------|--------------|--|---------------|---------------------|--|
| 2,3,7,8-TCDF | 0.11 | | 0.100 J | 2,3,7,8-TCDF-13C | 2.00 | 56 | |
| Total TCDF | 0.35 | | 0.100 J | 2,3,7,8-TCDD-13C | 2.00 | 59 | |
| 2,3,7,8-TCDD | ND | ***** | 0.110 A | 1,2,3,7,8-PeCDF-13C
2,3,4,7,8-PeCDF-13C | 2.00 | 53
53 | |
| Total TCDD | ND | | 0.100 | 1,2,3,7,8-PeCDD-13C | 2.00 | 55 | |
| ,-13,7025 | 140 | | 0.100 | 1,2,3,4,7,8-HxCDF-13C | 2.00 | 52 | |
| 1,2,3,7,8-PeCDF | ND | | 0.500 | 1.2.3.6.7.8-HxCDF-13C | 2.00 | 62 | |
| 2,3,4,7,8-PeCDF | ND | | 0.500 | 2,3,4,6,7,8-HxCDF-13C | 2.00 | 59 | |
| Total PeCDF | ND | | 0.500 | 1,2,3,7,8,9-HxCDF-13C | 2.00 | 54 | |
| 100700.000 | 22.0 | | 2.25 | 1,2,3,4,7,8-HxCDD-13C | 2.00 | 58 | |
| 1,2,3,7,8-PeCDD
Total PeCDD | ND | ***** | 0.500 | 1,2,3,6,7,8-HxCDD-13C | 2.00 | 68 | |
| Total FeCDD | ND | | 0.500 | 1,2,3,4,6,7,8-HpCDF-13C | 2.00 | 62
54 | |
| 1,2,3,4,7,8-HxCDF | ND | | 0.500 | 1,2,3,4,7,8,9-HpCDF-13C
1,2,3,4,6,7,8-HpCDD-13C | 2.00 | 60 | |
| 1,2,3,6,7,8-HxCDF | ND | ***** | 0.500 | OCDD-13C | 4.00 | 51 | |
| 2,3,4,6,7,8-HxCDF | ND | **** | 0.500 | GODD 100 | 4.00 | | |
| 1,2,3,7,8,9-HxCDF | ND | **** | 0.500 | 1,2,3,4-TCDD-13C | 2.00 | NA | |
| Total HxCDF | ND | Abdenia | 0.500 | 1,2,3,7,8,9-HxCDD-13C | 2.00 | NA | |
| 1,2,3,4,7,8-HxCDD | ND | - | 0.500 | 2,3,7,8-TCDD-37CI4 | 0.20 | 65 | |
| 1,2,3,6,7,8-HxCDD | ND | | 0.500 | 2,0,1,0 1000 01014 | 0.20 | | |
| 1,2,3,7,8,9-HxCDD | ND | - | 0.500 | | | | |
| Total HxCDD | ND | ***** | 0.500 | | | | |
| 1,2,3,4,6,7,8-HpCDF | ND | Sec. | 0.500 | Total 2.3.7.8-TCDD | | | |
| 1,2,3,4,7,8,9-HpCDF | ND | ***** | 0.500 | Equivalence: 0.011 ng/Kg | | | |
| Total HpCDF | ND | ***** | 0.500 | (Using ITE Factors) | | | |
| 1,2,3,4,6,7,8-HpCDD | ND | | 0.500 | | | | |
| Total HpCDD | 0.56 | - | 0.500 J | | | ģ., | |
| OCDF | ND | | 1.000 | | | | |
| OCDD | ND | | 1.000 | | | | |
| | | | | | | | |

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

LRL = Lower Reporting Limit

J = Concentration detected is below the calibration range

P = Recovery outside of target range

A = Detection Limit based on signal-to-noise measurement

t = interference

E = PCDE Interference

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

= See Discussion

Report No.....1084865

REPORT OF LABORATORY ANALYSIS

Tel: 612-607-1700 Fax: 612-607-6444

Method 8290 Laboratory Control Spike Results

Client - Code Environmental Services

Lab Sample ID Filename **Total Amount Extracted**

ICAL Date CCal Filename(s) Method Blank ID LCS-4389 U40225A_09

20.0 g 10/03/2003

U40225A_08 & U40225A_23 BLANK-4388

Matrix Dilution

Solid NA 02/23/2004 Extracted

Analyzed 02/25/2004 15:22 Injected By SMT

| Native
Isomers | Qs
(ng) | Qm
(ng) | %
Rec. | Internal
Standards | ng's
Added | Percent
Recovery |
|----------------------------|------------|------------|-----------|---|----------------------|---------------------|
| 2,3,7,8-TCDF | 0.20 | 0.18 | 88 | 2,3,7,8-TCDF-13C
2,3,7,8-TCDD-13C
1,2,3,7,8-PeCDF-13C | 2.00
2.00
2.00 | 59
61
57 |
| 2,3,7,8-TCDD | 0.20 | 0.18 | 92 | 2,3,4,7,8-PeCDF-13C
1,2,3,7,8-PeCDD-13C
1,2,3,4,7,8-HxCDF-13C | 2.00
2.00
2.00 | 58
60
53 |
| 1,2,3,7,8-PeCDF | 1.00 | 0.91 | 91 | 1,2,3,6,7,8-HxCDF-13C | 2.00 | 65 |
| 2,3,4,7,8-PeCDF | 1.00 | 0.87 | 87 | 2,3,4,6,7,8-HxCDF-13C | 2.00 | 63 |
| ACCOUNTS SEED | 1100 | 0.07 | | 1,2,3,7,8,9-HxCDF-13C | 2.00 | 58 |
| | | | | 1,2,3,4,7,8-HxCDD-13C | 2.00 | 57 |
| ,2,3,7,8-PeCDD | 1.00 | 0.95 | 95 | 1,2,3,6,7,8-HxCDD-13C | 2.00 | 75 |
| California Oracles | 3,11 | 215.7 | | 1.2.3.4.6.7.8-HpCDF-13C | 2.00 | 63 |
| | | | | 1,2,3,4,7,8,9-HpCDF-13C | 2.00 | 57 |
| ,2,3,4,7,8-HxCDF | 1.00 | 0.95 | 95 | 1,2,3,4,6,7,8-HpCDD-13C | 2.00 | 63 |
| ,2,3,6,7,8-HxCDF | 1.00 | 0.95 | 95 | OCDD-13C | 4.00 | 55 |
| 3,4,6,7,8-HxCDF | 1.00 | 0.95 | 95 | | 7.58 | |
| 1,2,3,7,8,9-HxCDF | 1.00 | 0.93 | 93 | 1.2.3.4-TCDD-13C | 2.00 | NA |
| | | | 9.8 | 1,2,3,7,8,9-HxCDD-13C | 2.00 | NA |
| 1,2,3,4,7,8-HxCDD | 1.00 | 0.92 | 92 | 2,3,7,8-TCDD-37Cl4 | 0.20 | 75 |
| 1,2,3.6.7.8-HxCDD | 1.00 | 0.96 | 96 | CERTIFICATION OF THE PROPERTY | | |
| 1,2,3,7,8,9-HxCDD | 1.00 | 0.99 | 99 | | | |
| W. C. & J. D. & C. & S. D. | | | | 4 | | |
| 1,2,3,4,6,7,8-HpCDF | 1.00 | 0.99 | 99 | | | |
| 1,2,3,4,7,8,9-HpCDF | 1.00 | 1.02 | 102 | | | |
| 1,2,3,4,6,7,8-HpCDD | 1.00 | 1.02 | 102 | | | |
| OCDF | 2.00 | 1.84 | 92 | | | |
| OCDD | 2.00 | 2.01 | 100 | | | |

Qs = Quantity Spiked Qm = Quantity Measured

Rec. = Recovery (Expressed as Percent)

P = Recovery outside of target range X = Background subtracted value

Nn = Value obtained from additional analysis

NA = Not Applicable

See Discussion

Report No....1084865

REPORT OF LABORATORY ANALYSIS

Tel: 612-607-1700 Fax: 612-607-6444

Method 8290 Analysis Results

Client - Code Environmental Services

Client's Sample ID Lab Sample ID Filename Injected By

Total Amount Extracted % Moisture Dry Weight Extracted ICAL Date CCal Filename(s) Method Blank ID

ASP-5 COMP 105346514 U40225B_17 SMT

13.2 g 24.4 10.0 g 10/03/2003

U40225A_23 & U40225B_23 BLANK-4388

Matrix Soil Dilution Collected

Received

02/18/2004 02/19/2004 02/23/2004

Extracted Analyzed 02/26/2004 09:31

| Native
Isomers | Conc
ng/Kg | EMPC
ng/Kg | LRL
ng/Kg | | Internal
Standards | ng's
Added | Percent
Recovery |
|---------------------|---------------|---------------|--------------|----|---|---------------|---------------------|
| 2,3,7,8-TCDF | 34000 | - | 43.0 | Α | 2,3,7,8-TCDF-13C | 2.00 | 88 1 |
| Total TCDF | 640000 | - | 1.0 | | 2,3,7,8-TCDD-13C | 2.00 | 72 |
| 7.7. | | | 1.0 | | 1,2,3,7,8-PeCDF-13C | 2.00 | 121 |
| 2,3,7,8-TCDD | 140 | | 13.0 | A | 2,3,4,7,8-PeCDF-13C | 2.00 | 110 1 |
| Total TCDD | 2200 | ***** | 1.0 | | 1,2,3,7,8-PeCDD-13C | 2.00 | 71 |
| | | | 100 | | 1,2,3,4,7,8-HxCDF-13C | 2.00 | 107 I |
| 1,2,3,7,8-PeCDF | 11000 | ***** | 120.0 | A | 1,2,3,6,7,8-HxCDF-13C | 2.00 | 73 |
| 2,3,4,7,8-PeCDF | 39000 | | | A | 2,3,4,6,7,8-HxCDF-13C | 2.00 | 68 |
| Total PeCDF | 400000 | | 5.0 | | 1,2,3,7,8,9-HxCDF-13C | 2.00 | 68 |
| , , | 400000 | | 5.0 | | 1,2,3,4,7,8-HxCDD-13C | 2.00 | 89 |
| 1,2,3,7,8-PeCDD | 250 | | 17.0 | A | 1,2,3,6,7,8-HxCDD-13C | 2.00 | 75 |
| Total PeCDD | 1000 | ***** | 5.0 | | 1,2,3,4,6,7,8-HpCDF-13C | 2.00 | 122 1 |
| 10 | 1000 | Geses | 5.0 | | 1,2,3,4,7,8,9-HpCDF-13C | 2.00 | 69 |
| 1,2,3,4,7,8-HxCDF | 52000 | ***** | 23.0 | A | 1,2,3,4,6,7,8-HpCDD-13C | 2.00 | 83 |
| 1,2,3,6,7,8-HxCDF | 13000 | - | | Â | OCDD-13C | 4.00 | 80 |
| 2,3,4,6,7,8-HxCDF | 16000 | | | Â | 0000-130 | 4.00 | 00 |
| 1,2,3,7,8,9-HxCDF | 4200 | | | Â | 1,2,3,4-TCDD-13C | 2.00 | NA |
| Total HxCDF | 180000 | | 5.0 | ~ | 1,2,3,7,8,9-HxCDD-13C | 2.00 | NA |
| TOTAL TIXODE | 100000 | | 5.0 | | 1,2,3,7,6,9-1130 | 2.00 | IVA |
| 1,2,3,4,7,8-HxCDD | - | 280 | 9.6 | IA | 2,3,7,8-TCDD-37Cl4 | 0.20 | 101 |
| 1,2,3,6,7,8-HxCDD | 800 | 200 | | A | 2,3,7,0-1000-37014 | 0.20 | 101 |
| 1,2,3,7,8,9-HxCDD | 360 | | 13.0 | | | | |
| Total HxCDD | 6600 | | 5.0 | ~ | | | |
| TOTAL PIACOD | 0000 | ***** | 5.0 | | | | |
| 1,2,3,4,6,7,8-HpCDF | 59000 | - | 51.0 | A | Total 2,3,7,8-TCDD | | |
| 1,2,3,4,7,8,9-HpCDF | 2300 | | | Â | | | |
| Total HpCDF | 69000 | | 5.0 | ~ | Equivalence: 33000 ng/Kg
(Using ITE Factors) | | |
| Total TipODI | 09000 | | 5.0 | | (Using TE raciors) | | |
| 1,2,3,4,6,7,8-HpCDD | 5900 | (and a | 16.0 | ۸ | | | |
| Total HpCDD | 12000 | - | 5.0 | ~ | | | |
| rotal ripodob | 12000 | | 5.0 | | | | |
| OCDF | 49000 | 3.00 | 13.0 | A | | | |
| OCDD | 52000 | | 10.0 | | | | |

Results reported on a dry weight basis Conc = Concentration (Totals include 2,3,7,8-substituted isomers)

EMPC = Estimated Maximum Possible Concentration

A = Detection Limit based on signal-to-noise measurement
J = Concentration detected is below the calibration range

B = Less than 10 times higher than method blank level

P = Recovery outside of target range Nn = Value obtained from additional analysis

LRL = Lower Reporting Limit

i = interference

E = PCDE Interference

S = Saturated signal

ND = Not Detected NA = Not Applicable

NC = Not Calculated

= See Discussion

Report No....1084865

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.



Generator Approval Notification

Customer: CODE ENVIRONMENTAL

Fax: (732) 969-2701

RECEIVED

May 7, 2004

MAY 10 2004

JACK MCBURNEY
BAYONNE BARREL AND DRUM
C/O DE MAXIMIS INC
186 CENTER ST., SUITE 290
CLINTON, NJ 08809

This Generator Approval Notification acknowledges the acceptability of waste material(s) into the EQ environmental protection facility identified below and ensures that this facility has the appropriate permit(s) issued by federal and state regulatory agencies to properly transport, treat, and/or dispose of the waste material(s).

EQ FACILITY: Wayne Disposal, Inc. (MID048090633)

49350 North I-94 Service Drive, Belleville, Michigan 48111

Approval Number: 050604PBB-OTS

Generator EPA ID #: NJD009871401 Approved Container: TONS Expires On: 5/6/2005

Waste Common Name: ASH PILE 5

Comments: USE PCB1 ON MI MANIFEST. INCLUDE STORAGE START DATE, UNIQUE CONTAINER ID

NUMBER AND WT IN KG. NO FDU

Primary Waste Code: PCB1

The Approval(s) listed above are based upon characterization information supplied to EQ by the Customer and the generator (if other than the Customer). The Customer is ultimately responsible for the accuracy and completeness of all such information, whether provided by the Customer or the generator. The Customer must notify the EQ Resource Team immediately upon knowledge of any changes to this information. This Approval and all wastes which are transported, delivered, or tendered to EQ under this Approval shall be subject to the attached Standard Terms and Conditions.

The Approval(s) will expire on the date(s) noted. Any new Approvals obtained from EQ on future business will be valid for a period of one (1) year from the date of issuance. Within 60 days of the Approval Expiration Date, you will be notified of the requirements for recertification.

Mail or fax to: Wayne Disposal, Inc., 49350 North I-94 Service Drive, Belleville, Michigan 48111, Phone: 1-800-592-5489 Fax: 1-800-592-5329

Rev. 1/99 Page 1 of 1 Form 1028

CH99425B FZ1029912 TX3304534 10/25/05

RUN DATE 03/13/06 RUN TIME 12:05 PM

PAGE: 1

Certificate of Disposal

Stream Order Manifest Received Name and Address Number Number Number Date

BAYONNE BARREL & DRUM SITE

DEMAXIMIS, INC

186 CENTER ST SUITE 290

CLINTON, NJ 08809

ATTN: WILLIAM LEE

- SHP Disposal Inventory Customer's Unique -CONTAINER-Cntrl Nbr Serial Number To Method Date Contents Type 7611699 03/09/06 CM CHSI I

Total Containers: 1

THE ABOVE-REFERENCED WASTE WAS PROCESSED AND DISPOSED OF, IN ACCORDANCE WITH 40 CFR 761, AND THE FACILITY'S TSCA AUTHORIZATION.

RUN DATE: 03/13/06 RUN TIME: 12:05 PM

PAGE: 2

Disposal Method

'I' - Waste that was Incinerated

'L' - Waste that was Landfilled

'O' - Offsite Disposal
'C' - Offsite Reclamation

Disposal Facility

CLEAN HARBORS DEER PARK; LP 2027 BATTLEGROUND ROAD LAPORTE, TX 77571

EPA ID

TXD055141378

fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615). I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section (s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate, and complete.

Please call (281) 930-2315 if there are any questions concerning the information on this Certificate of Disposal.

Authorized Agent

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY P.O. Box 13087

Austin, Texas 78711-3087

Please print or type. (Form designed for use on alite (12-pitch) typewriter.)



FZ1029912 PPW 08/25/2005

Form approved. OMB No. 2050-0039.

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WEIGHED ON A FAIRBANKS SCALE MASCI REALTY, INC.

OPEN DAILY 7 a.m. - 6 p.m. Phone: 973-589-4176

| DATE 128 DOREMU | JS AVE., NEWARK, N.J. 07105 Fax: 973-589-3072 |
|--|---|
| 9~22~05 12455
CUSTOMER'S NAME <u>EPIC</u> | CONTAINER# 2404 |
| ADDRESS Denville, NJ | TRAILER# |
| COMMODITY Dirt | TRACTOR# |
| CARRIER EPIC | COMPARTMENTS#, |
| - 31560
- 30140
- 15.0 | OTHER |
| FAIRBANKS CAT. NO. 083905 | SHIPPEN |
| FAIRBANNS CAL NO. 083905 | WEIGHER |
| 0682 | |

Main Gate Truck Scale

Current Date 10/26/2005

Clean Harbors Deer Park, LP, 2027 Battleground Rd

P.O. Box 609, Deer Park, TX 77536

(281) 930-4508 PH

(281) 930-4516 FAX

Current Time

Current Weight Transaction

Bill of Lading

279471

Additional BOL

Manifest#

3304534

HO#

Customer

Bayonne B&D

Pickup Location

Newark, NJ

Container

EPIU222404

Equipment Type

Bin

Transporter to Facility

CHDE

Inbound Scale Operator

CW

Oubound Scale Operator

CW

Inbound Plant

GARY

Outbound Plant

GARY

Inbound Truck YM Outbound Truck

YM

D#

In Date 10/19/2005 1D# **Out Date**

10/19/2005

In Time

10:35

Out Time

10:55

In Weight

57860

Out Weight

14240

Net Weight 43626

Comments

25 YD IM RT BIN

Scale operator signature of complete transaction:

10:35

No. of weights for this BOL = 1

Total Weight Summary

10/19/2005

No In Date In Time 10/19/2005

In Weight 57860

Out Date Out Time Out Weight

10:55

14240

Operator CW

Net Weight

43620 ~ 780

** This scale is calibrated every month by authorized personnel

Operator

CW

35,920

RUN DATE 12/28/05 RUN TIME 12:30 PM

PAGE: 1

Certificate of Disposal Name and Address Stream Order Manifest Received Number Number Date

BAYONNE BARREL & DRUM SITE DEMAXIMIS, INC CH99425B FZ1029912 TX3480991 11/06/05

186 CENTER ST SUITE 290 CLINTON, NJ 08809

ATTN: WILLIAM LEE

Total Containers: 1

THE ABOVE-REFERENCED WASTE WAS PROCESSED AND DISPOSED OF, IN ACCORDANCE WITH 40 CFR 761, AND THE FACILITY'S TSCA AUTHORIZATION.

RUN DATE: 12/28/05 RUN TIME: 12:30 PM

PAGE: 2

Disposal Method

'I' - Waste that was Incinerated

'L' - Waste that was Landfilled

'O' - Offsite Disposal
'C' - Offsite Reclamation

Disposal Facility

CLEAN HARBORS DEER PARK, LP 2027 BATTLEGROUND ROAD

LAPORTE, TX 77571

EPA ID

TXD055141378

Under civil and criminal penalties of law for making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615). I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section (s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate, and complete.

Please call (281) 930-2315 if there are any questions concerning the information on this Certificate of Disposal.

Authorized Agent

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY P.O. Box 13087

Austin, Texas 78711-3087



FZ1029912 PPW 08/25/2005

Please print or type. (Form designed for use on alite (12-pitch) type

| WASTE MANIFEST N J D 0 0 9 8 7 1 4 0 1 8 | Manifest
ocument No. | 2. Pa | TIMO(II) | | the shaded areas
by Federal law |
|--|--|--|--|-------------------------------|--|
| 3. Generator's Name and Mailing Address Site Address: | | A St | te Manifest Doc | | |
| ATTN: William Lee 150 Raymond Bouleverd | | 02.00 | 3480 | 199 | 1 |
| Beyonne Berrel & Drum Site 150 Raymond Bouleverd ATTN: William Lee 150 Raymond Bouleverd De Macamis, Inc. 186 Center Street Sulfergal; NJ 07105 | | | tie Generator's I | D | |
| 4. Generator's Phone (908) 735-9315 | | Z | 4, | | D003 |
| 5. Transporter 1 Company Name 6. US EPA ID Num | | C Su | de Transporter's | ID 1 | 7244 |
| EPIC Transportation NJD98664750 | 1 | D Tr | msporier's Phon | 8073 | 600 BEDE |
| 7. Transporter 2 Company Name 8. US EPA ID Num | nber | E St | ne Transporter's | 10 | -020-3306 |
| CSX Transportation F L D 0 0 6 9 2 | 1.340 | Fift | nsporter's Phon | 9 | 100A 270 54 |
| 9. Designated Facility Name and Site Address 10. US EPA ID Num | | O. St | ate Facility's 1D | | facility to be |
| Clean Harbors Deer Park LP | | | S 2 | | 500 |
| 2027 Battleground Road
La Porte, TX, 77571 | | H. Fa | dity's Phone | | |
| TXD0551.4 | 1.3.7.8 | E . | ** | | (281) 630-23 |
| 11A. US DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group) | 12. Conta | iners | 13.
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Unit | C. |
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1-15-1-15-15-15-15-15-15-15-15-15-15-15- | | ERGENCY PH | y C | (800) 483-37 |
| 11c: CHIBACAS 15. Special Handling Instructions and Additional Information 11a.ENG0171 (S) (E) WASTE ASH PILES | | Đ | ERGENCY PH | ONE# | ************************************** |
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FZ1029912

Please print or type. (Form designed for use on elite (12-pltch) typewrite PPW 08/25/2005 Form Approved, OMB No. 2050-0039. UNIFORM HAZARDOUS 21. Generator's US EPA ID No. Manifest Document No. 22. Page Information in the shaded WASTE MANIFEST areas is not required by Federal NJD009871401 2 of 2 80991 (Continuation Sheet) 23. Generator's Name Bayonne Barrel & Drum Site E. State Manifest Document Number TX3480991 ATTN: William Lee M. State Generator's ID De Maximie, Inc., 186 Center Street Suite 290 Climton, NJ 08809 D0034 25. US EPA ID Number M. State Transporter's ID Union Pacific Railroad (402) 661-6820 ransporter Company Name MO HEROS ENG SURVICES ITY MYADOTA 3 23250 30. Total Quantity 31. Unit WVVol Waste No. 28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) Туре No. HEA a. b. C. GENERATO d. e. q. h. S. Additional Descriptions for Materials Lister Assoc T. Handling Codes for Wastes Listed Above 32. Special Handling Instructions and Additional Information 33. Transporter Acknowledgement of Receipt of Materials
Printed/Typed Name

34. Transporter Acknowledgement of Receipt of Materials
Printed/Typed Name

On Acknowledgement of Receipt of Materials
Printed/Typed Name Date Month Day Signature Year Date Printed/Typed Name Month Day Year 11 105/05 35. Discrepancy Indication Space

Style CF 18 LANEL ASTER @ (800) 621-5808 www.labelmaster.com

EPA Form 8700-22 A (Rev. 9-86) Previous editions are obsolete



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WEIGHED ON A FAIRBANKS SCALE MASCI REALTY, INC. 128 DOREMUS AVE., NEWARK, N.J. 07105

OPEN DAILY 7 a.m. - 6 p.m. Phone: 973-589-4176 Fax: 973-589-3072

| DORESS Denville | NI | TRAILER# |
|-----------------|---------|--|
| Din Din | t | TRACTOR# |
| RAIER EPIC | | COMPARTMENTS# |
| | 29440 (| LBS TARE-DRIVER ON OFF LBS NET @ PER LB, PRICE Charge SHIPPER COLUMN |

APR - 4 2006

CLEAN HARBORS DEER PARK, LP CERTIFICATE OF DISPOSAL

CH99425B FZ1029912 TX3480992 11/06/05

RUN DATE 03/23/06 RUN TIME 5:00 PM

PAGE: 1

 Certificate of Disposal
 Stream
 Order
 Manifest
 Received

 Name and Address
 Number
 Number
 Number
 Date

BAYONNE BARREL & DRUM SITE DEMAXIMIS, INC

186 CENTER ST SUITE 290

CLINTON, NJ 08809 ATTN: WILLIAM LEE

| Inventory Customer's Unique | | | CONTAINER | SHP | Disp | osal | |
|-----------------------------|---------------|------|-----------|-----|--------|----------|--|
| Cntrl Nbr | Serial Number | Туре | Contents | To | Method | Date | |
| 7692848 | | CM | CHSI | | 1 | 03/11/06 | |

Total Containers: 1

THE ABOVE-REFERENCED WASTE WAS PROCESSED AND DISPOSED OF, IN ACCORDANCE WITH 40 CFR 761, AND THE FACILITY'S TSCA AUTHORIZATION.

RUN DATE: 03/23/06 RUN TIME: 5:00 PM

PAGE: 2

Disposal Method

'I' - Waste that was Incinerated

'L' - Waste that was Landfilled

'O' - Offsite Disposal
'C' - Offsite Reclamation

Disposal Facility

CLEAN HARBORS DEER PARK, LP 2027 BATTLEGROUND ROAD

LAPORTE, TX 77571

EPA ID

TXD055141378

Under civil and criminal penalties of law for making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615). I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section (s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate, and complete.

Please call (281) 930-2315 if there are any questions concerning the information on this Certificate of Disposal.

Authorized Agent

TEXAS COMMISSION ON **ENVIRONMENTAL QUALITY** P.O. Box 13087



RECEIVED

Vellow-Transporter

Green-Generator's first conv

Pink-TAD Facility

White - original

FZ1029912

Austin, Texas 78711-3087 PPW 08/25/2005 NOV 1.0 2005 Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form approved. OMB No. 2050-0039. UNIFORM HAZARDOUS 1. Generator's US EPA ID No. Manifest 2. Page 1 information in the shaded areas is not required by Federal law. WASTE MANIFEST Document No NJD009871 3. Generator's Name and Mailing Address A. State Manifest Document Number -Site Address: 150 Raymond Boulevard Bayonne Barrel & Drum Site ATTN: William Lee De Maximis, inc. 186 Cer Circon M. Casho (1908) Canterator's Prone (1908) 3480992 186 Center Street Sulleyers, NJ 07105 B. State Generator's ID D003 908 735-9315 C. State Transporter's ID. 17244 5. Transporter 1 Company Name US EPA ID Number D. Transporter's Phone 973-690-5506 EPIC Transportation
7. Transporter 2 Company Name ·NJD986647501 E. State Transporter's ID US EPA ID Number F. Transporter's Phone. CSX Transportation FLD006921340 (904) 279-5405 Designated Facility Name and Site Address
 Clean Harbors Deer Park LP G. State Facility's 1D US EPA ID Number 50089 2027 Battleground Road H. Facility's Phone La Porte, TX, 77571 (281) 930-2300 TXD055141378 11. US DOT Description (including Proper Shipping Name, Hazard Class, ID 13. Total 12. Containers Unit Wt/Vol Waste No. Number and Packing Group) No. Type Quantily a. HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9. OUT\$303H est NA3077, PG III D006 D008 001 0029 ь. 23.69 C. CR d OFFC J. Additional Descriptions for Materials Listed Above K. Handling Codes for Wastes Listed Above But the second 15. Special Handling Instructions and Additional Information EMERGENCY PHONE #: (800) 483-3718 11a.ERG#171 (S).(E) WASTE ASH PILES JOEP# 17244 Deca1# 080387 SUNTRINE # 2411 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked, and labelled/placarded, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, it I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can affor Printed/Typed Name Month Day Year 0.912205 DASE 17. Transporter 1 Acknowledgement of Receipt of Materials Date Printed/Typed Name Month Day Vear Signature 0.9122105 scall ernande? 18. Transporter 2 Acknowledgement of Receipt of Materials Date Printed/Typed Name Month Day ON BEHALF OF CO Signature 09126105 ROGERS NEZ 19. Discrepancy Indication Space 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping. Date Year Printed/Typed Name Month Day

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Pleaso print or type. (Form designed for use on elite (12-pitch) typewrite PPW 08/25/2005 Form Approved, OMB No. 2050-0039. UNIFORM HAZARDOUS 21. Generator'S US EPA ID No. Manifest Document No. 22. Page Information in the shaded WASTE MANIFEST areas is not required by Federal (Continuation Sheet) NJD009871401 2 of 2 20 997 23. Generator's Name Bayonne Barrel & Drum Site L. State Manifest Document Number TX3480992 ATTN: William Lee M. State Generator's ID De Maximis, Inc., 186 Center Street Suite 290 Clinton, NJ 06809 24. Transporter Company Name D003 25. US EPA ID Number N. State Transporter's ID Union Pacific Railroad N E D 0 0 1 7 9 2 9 1 0 0. Transporter's Phone (402) 661-6829 26. Transporter (1) Company Name P. State Transporter's ID 41315 27. US EPA ID Number ean Hartons En Services Inc 1 ma DO39322250 Q. Transporter's Phone 28 30. Total Quantity 29. Containers 28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) Waste No. Туре No. b. C. d. e. g. h. 6. Additional Descriptions for Materials Listed Above T. Handling Codes for Wastes Listed Above 32. Special Handling Instructions and Additional Information 33. Transporter Acknowledgement of Receipt of Materials Date Printed/Typed Name Signature Month Day Year 34. Transporter (4) Acknowledgement of Receipt of Materials Date Month Day Printed/Typed Name Year 35. Discrepancy Indication Space Style CF 18 LABEL ASTER (800) 621-5808 www.labelmaster.com

RUN DATE 12/28/05 RUN TIME 12:30 PM

PAGE: 1

Certificate of Disposal

Order Stream

Manifest Received

Date

Name and Address

Number Number

Number

BAYONNE BARREL & DRUM SITE

DEMAXIMIS, INC

186 CENTER ST SUITE 290 CLINTON, NJ 08809

ATTN: WILLIAM LEE

CH99425B FZ1029912 TX3480994 11/06/05

Inventory Customer's Unique Cntrl Nbr Serial Number

CONTAINER-Contents Type

SHP Disposal Method To Date

7692828

CM

CHSI

12/17/05

Total Containers: 1

THE ABOVE-REFERENCED WASTE WAS PROCESSED AND DISPOSED OF, IN ACCORDANCE WITH 40 CFR 761, AND THE FACILITY'S TSCA AUTHORIZATION.

RUN DATE: 12/28/05 RUN TIME: 12:30 PM

PAGE: 2

Disposal Method

'I' - Waste that was Incinerated

'L' - Waste that was Landfilled

'O' - Offsite Disposal
'C' - Offsite Reclamation

Disposal Facility

CLEAN HARBORS DEER PARK, LP 2027 BATTLEGROUND ROAD

LAPORTE, TX 77571

EPA ID

TXD055141378

Under civil and criminal penalties of law for making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615). I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section (s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate, and complete.

Please call (281) 930-2315 if there are any questions concerning the information on this Certificate of Disposal.

Authorized Agent

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Please print or type. (Form designed for use on site (12-pitch) typewriter.)

P.O. Box 13087

Austin, Texas 78711-3087



FZ1029912 PPW 08/25/2005

Form approved, OMB No. 2050-0039.

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E. Williams 29-33-05 201-truck 2473 BB.D.

WEIGHED ON A FAIRBANKS SCALE MASCI REALTY, INC.

128 DOREMUS AVE., NEWARK, NJ. 07105

OPEN DAILY 7 a.m. - 6 p.m. Phone: 973-589-4176 Fax: 973-589-3072

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RUN DATE 05/05/06 RUN TIME 5:00 PM

PAGE: 1

Certificate of Disposal Stream Order Manifest Received Name and Address Number Number Date

BAYONNE BARREL & DRUM SITE

CH99425B FZ1029912 TX3480995 11/06/05

DEMAXIMIS, INC 186 CENTER ST SUITE 290 CLINTON, NJ 08809

ATTN: WILLIAM LEE

Inventory Customer's Unique ------CONTAINER------SHP Disposal Cntrl Nbr Serial Number Type Contents To Method Date

7692851 CM CHSI I 05/02/06

Total Containers: 1

THE ABOVE-REFERENCED WASTE WAS PROCESSED AND DISPOSED OF, IN ACCORDANCE WITH 40 CFR 761, AND THE FACILITY'S TSCA AUTHORIZATION.

RUN DATE: 05/05/06 RUN TIME: 5:00 PM

PAGE: 2

Disposal Method :

'I' - Waste that was Incinerated

'L' - Waste that was Landfilled

'O' - Offsite Disposal
'C' - Offsite Reclamation

Disposal Facility

CLEAN HARBORS DEER PARK, LP 2027 BATTLEGROUND ROAD

LAPORTE, TX 77571

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Please call (281) 930-2315 if there are any questions concerning the information on this Certificate of Disposal.

Authorized Agent

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY P.O. Box 13087

Austin, Texas 78711-3087



RECLITED

FZ1029912 PPW 08/25/2005

| UNIFORM HAZARDOUS WASTE MANIFEST Generator's Name and Mailing Address Site Address: Site Address: | Manifest
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| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment a classified, packaged, marked, and labelled/placarded, and are in all respects in proper contational government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the vobe economically practicable and that I have selected the practicable method of treatment, and future threat to human health and the environment; OR, if I am a small quantity general select the best waste management method that is available to me and that I ope affort. | re fully and accura
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| 17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Call Hernande? Signature | A | · | and | 2 | Month Day Y |
| 18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name NE/L ROGERS (ON BEHALF OF CSX) Signature | Rogers | _ | | _ | Month Day Y |
| 19. Discrepancy Indication Space | | | | | |
| | | | | | |
| 20. Facility Owner or Operator: Certification of receipt of hazardous materials cove | | | | | 19. |

FZ1029912 Form Approved, OMB No. 2050-0039. Please print or type. (Form designed for use on elite (12-pitch) typewrite PPW 08/25/2005 Information in the shaded UNIFORM HAZARDOUS 21. Generator's US EPA ID No. Manifest Document No. 22. Page areas is not required by Federal WASTE MANIFEST 2 of 2 NJD009871401 80995 (Continuation Sheet) L. State Manifest Document Number 23. Generator's Name Bayonne Barrel & Drum Site ATTN: William Lee TX3480995 M. State Generator's ID De Maximia, inc., 186 Center Street Suite 290
Clinton, NJ 06809
24. Transporter Company Name
Union Pacific Reilroad
25 Transporter Company Name D0034 N. State Transporter's ID 25. US EPA ID Number O O. Transporter's Phone NED00179291 (402) 661-6829 P. State Transporter's ID 41315 27. US EPA ID Number HEATS EN SOLICE THE MAN 03932220 Q. Transporter's Phones 31. Unit Wt/Vol 29. Containers 30. Total R. Waste No. 28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) No. Type Quantity 8. b. C. d. e. a. h. T. Handling Codes for Wastes Listed Above S. Additional Descriptions for Materials Listed Above 32. Special Handling Instructions and Additional Information Date 33. Transporter Acknowledgement of Receipt of Materials Month Day Year Printed/Typed Name Signature 34. Transporter Date Acknowledgement of Receipt of Materials Month Day Year Printed/Typed Name \$ignature 35. Discrepancy Indication Space

Style CF 18 LABELI (ASTER (8) (800) 621-5808 www.labelmaster.com

RUN DATE 12/28/05 RUN TIME 12:30 PM

PAGE: 1

Certificate of Disposal Name and Address Stream Order Manifest Received Number Number Number Date

CH99425B FZ1029912 TX3480996 11/10/05

To

Method

Date

BAYONNE BARREL & DRUM SITE DEMAXIMIS, INC

Serial Number

186 CENTER ST SUITE 290

CLINTON, NJ 08809 ATTN: WILLIAM LEE

Type

7714642 CM CHSI I 12/23/05

Contents

Total Containers: 1

Cntrl Nbr

RUN DATE: 12/28/05 RUN TIME: 12:30 PM

PAGE: 2

Disposal Method

T' - Waste that was Incinerated

'L' - Waste that was Landfilled

'O' - Offsite Disposal

'C' - Offsite Reclamation

Disposal Facility

CLEAN HARBORS DEER PARK, LP 2027 BATTLEGROUND ROAD

LAPORTE, TX 77571

EPA ID

TXD055141378

Under civil and criminal penalties of law for making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615). I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section (s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate, and complete.

Please call (281) 930-2315 if there are any questions concerning the information on this Certificate of Disposal.

Authorized Agent

TEXAS COMMISSION ON **ENVIRONMENTAL QUALITY**

P.O. Box 13087

Austin, Texas 76711-3087 Please print or type. (Form designed for use on alite (12-pitch) typewriter.)



FZ1029912 PPW 08/25/2005
Form approved, OMB No. 2050-0039.

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| 7. Transportation | NJD98664750
8. US EPA ID Nur | nber | E 514 | le Transporter's | 10 | 1- 8 90-550 |
| CSX Transportation | FLD00692 | | A | nsponers Phon | 0 | (904) 279 540 |
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FZ1029912

Please print or type. (Form designed for use on elite (12-pitch) typewrite PPW 08/25/2005

Form Approved. OMB No. 2050-0039.

| 23. Generator's Name
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ATTN: William Leo
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WEIGHED ON A FAIRBANKS SCALE MASCI REALTY, INC. 128 DOREMUS AVE., NEWARK, N.J. 07105

OPEN DAILY 7 a.m. - 6 p.m. Phone: 973-589-4176 Fax: 973-589-3072

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Denville, NJ | CONTAINER# 0 559 |
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RUN DATE 12/28/05 RUN TIME 12:30 PM

PAGE: 1

Certificate of Disposal Name and Address Stream Order Manifest Received Number Number Date

BAYONNE BARREL & DRUM SITE

CH99425B FZ1029912 TX3480997 11/10/05

DEMAXIMIS, INC 186 CENTER ST SUITE 290 CLINTON, NJ 08809

ATTN: WILLIAM LEE

CONTAINER-SHP Disposal Inventory Customer's Unique Method Cntrl Nbr Serial Number Type Contents To Date 12/21/05 1 7714698 CHSI CM

Total Containers: 1

THE ABOVE-REFERENCED WASTE WAS PROCESSED AND DISPOSED OF, IN ACCORDANCE WITH 40 CFR 761, AND THE FACILITY'S TSCA AUTHORIZATION.

RUN DATE: 12/28/05 RUN TIME: 12:30 PM

PAGE: 2

Disposal Method

'I' - Waste that was Incinerated

'L' - Waste that was Landfilled

'O' - Offsite Disposal
'C' - Offsite Reclamation

Disposal Facility

CLEAN HARBORS DEER PARK, LP 2027 BATTLEGROUND ROAD

LAPORTE, TX 77571

EPA ID

TXD055141378

Under civil and criminal penalties of law for making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615). I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section (s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate, and complete.

Please call (281) 930-2315 if there are any questions concerning the information on this Certificate of Disposal.

Authorized Agent

TEXAS COMMISSION ON ENVIRONMENTAL QUARTY

P.O. Box 13087

Austin, Texas 78711-3087

Please print or type. (Form designed for use on elite (12-pt/ch) typewriter.)



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FZ1029912

PPW 08/25/2005 Form approved, OMB No. 2050-0039.

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| u | NIFORM HAZAŘDOUS
WASTE MANIFEST
(Continuation Sheet) | 21. Generator's US EPA ID No. N J D 0 0 9 8 7 1 4 | 08/25/2005
Manifest Doc
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| 24. | Transporter Company Nan | ne | 25. US EPA ID Num | ber | N. Slate T | ansporter | sID | |
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| 28. | US DOT Description (Including | Proper Shipping Name, Hazard Cla | ass, and ID Number) | No. | | 30.
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| S . 4 | Additional Descriptions for Meta | Palys Lingest Annoya | | | Y. Hand | ing Codes | for Waste | s Listed Above |
| | | | | | | | 2 | |
| 32. | Special Handling Instructions | and Additional Information | | | | | | |
| 33. | Transporter Acknowled | dgement of Receipt of Materials | Signature | | | | | Date
Month Day |
| | - Interriyped Name | | Signature | | | | | Luciani, south |

Style CF 18 LAMEL® ASTER® (200) 621-6608 www.labelmaster.com

EPA Form 8700-22A (Rev. 9-68) Previous editions are obsciete.



WEIGHED ON A FAIRBANKS SCALE MASCI REALTY, INC.

OPEN DAILY 7 a.m. - 6 p.m. Phone: 973-589-4176

| DATE | 128 DOREMUS AVE., NEWARK, NJ. 07105 Fax: 973-589-307 |
|---|--|
| 9-23-05 8:52
CUSTOMER'S NAME EPIC | CONTAINER # 2506 |
| ADDRESS Denville, NJ | TRAILER# |
| COMMODITY Dirt | TRACTOR# 362 |
| CARRIER EPIC | COMPARTMENTS# |
| 70340 1b
31660
38680
FAIRBANKS CAT. NO. 083905 | OTHER # |
| PAIRBANKS CAL. NO. 083905 | WEIGHER |
| 0696 | |

CLEAN HARBORS DEER PARK, LP CERTIFICATE OF DISPOSAL

RUN DATE 01/30/06 RUN TIME 5:30 PM

PAGE: 1

Certificate of Disposal

Order Stream

Received

Name and Address

Number Number Number

Manifest Date

BAYONNE BARREL & DRUM SITE DEMAXIMIS, INC

186 CENTER ST SUITE 290

CLINTON, NJ 08809 ATTN: WILLIAM LEE CH99425B FZ1029912 TX3480998 10/25/05

| Inventory | Customer's Unique | - | CONTAINER | SHP | Dispo | sal |
|-----------|-------------------|------|-----------|-------------|-------------|---------|
| Cntrl Nbr | Serial Number | Туре | Contents | To | Method | Date |
| | | | | *********** | *********** | |
| 7611721 | | CM | CHSI | | 1 (| 1/28/06 |

Total Containers: 1

THE ABOVE-REFERENCED WASTE WAS PROCESSED AND DISPOSED OF, IN ACCORDANCE WITH 40 CFR 761, AND THE FACILITY'S TSCA AUTHORIZATION.

CLEAN HARBORS DEER PARK, LP. CERTIFICATE OF DISPOSAL

RUN DATE: 01/30/06 RUN TIME: 5:30 PM

PAGE: 2

Disposal Method

'I' - Waste that was Incinerated

'L' - Waste that was Landfilled

'O' - Offsite Disposal
'C' - Offsite Reclamation

Disposal Facility :

CLEAN HARBORS DEER PARK, LP 2027 BATTLEGROUND ROAD

LAPORTE, TX 77571

EPA ID

TXD055141378

Under civil and criminal penalties of law for making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615). I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section (s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate, and complete.

Please call (281) 930-2315 if there are any questions concerning the information on this Certificate of Disposal.

Authorized Agent

CLEAN HARBORS DEER PARK, LP

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

P.O. Box 13087

Austin, Texas 78711-3087



FZ1029912

PPW 08/25/2005
Form approved. OMB No. 2050-0039.

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FZ1029912

Please print or type. (Form designed for use on elite (12-pltch) typewrite PPW 08/25/2005

Form Approved. OMB No. 2050-0039.

| WASTE MANIFEST
(Continuation Sheet)
3. Generator's Name
Bayonne Barrel & Drum St | NJD009871401 | 80998 | | Manifest Doo | ument Nu | red by Federal
 |
|---|---------------------------------------|---------------------------------------|--------------------------|--------------------------|-------------|----------------------|
| ATTN: William Lee
De Maximia, Inc., 186 Cen
Clinton, NJ 08809 | | | Secretary and the second | e Generator's | | D003 |
| 4. Transporter Company Nar Union Pacific Railroad | | US EPA ID Number
0 0 1 7 9 2 9 1 (| | Transporter | | - |
| ransporter 4 Company Na | me | US EPA ID Number | P. Stat | Trensporter | 3 ID 4 | 402) 661-662
3-15 |
| Ila West | | 039233250 | | | 31.
Unit | 920 PL |
| нм | Proper Shipping Name, Hazard Class, a | nd ID Number) No. | Туре | 30.
Total
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| 2. Special Handling Instructions | and Additional Information | 4•b | | | | |
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| Printed/Typed Name | Jallace & | Grafing Stand | u | Dale | bee | Mary 984 C |
| 4. Transporter Acknowle Printed/Typed Name | dgement of Receipt of Materials | gnature | | | | Month Day Y |
| 35. Discrepancy Indication Space | | | | | | |

WEIGHED ON A FAIRBANKS SCALE MASCI REALTY, INC.

OPEN DAILY 7 a.m. - 6 p.m. Phone: 973-589-4176

2

| DATE | 128 DOREMUS AVE., NEWARK, N.J. 07105 | Fax: 973-589-307 |
|-----------------------------------|--|------------------|
| 9-23-05 9+59 CUSTOMER'S NAME EPIC | container#_20 | 50 |
| ADDRESS Denville, NJ | TRAILER# | |
| COMMODITY Dirt | TRACTOR# 36 | 5/ |
| CARRIER EPIC | COMPARTMENTS# | |
| 58320 1b
- 31 20
- 27040 | OTHER # LBS. GROSS LBS TARE-DRIVER ON LBS NET @ SHIPPER | OFFOFF |
| FAIRBANKS CAT. NO. 083905 | WEIGHER | |
| 0701 | | |

Main Gate Truck Scale

Current Date 10/25/2005

Clean Harbors Deer Park, LP, 2027 Battleground Rd P.O. Box 609, Deer Park, TX 77536

P.O. Box 609, Deer Park, (281) 930-4508 PH (281)

(281) 930-4516 FAX

Current Time 16:52

Current Weight Transaction

| Bill of Lading | 279468 | Additional BOL | |
|----------------------------|-------------|---------------------------|------------|
| Manifest# | 3480998 | но# | |
| Customer | Bayonne B&D | Pickup Location | Newark, NJ |
| Container | EPIU222050 | Equipment Type | Bin |
| Transporter
to Facility | CHDE | | |
| Inbound Scale
Operator | SB | Oubound Scale
Operator | SB |
| Inbound Plant
Driver | CHRIS | Outbound Plant
Driver | CHRIS |
| Inbound Truck
ID# | 47 | Outbound Truck
ID# | 17 |
| In Date | | | #0:0031111 |
| In Date | 10/25/2005 | Out Date | 10/25/2005 |
| In Time | 10/25/2005 | Out Date Out Time | 10/25/2005 |

Net Weight 27380

Comments

25 YD IM RT BIN

Scale operator signature of complete transaction:

No. of weights for this BOL = 2

Total Weight Summary

| No | In Date | In Time | Operator | In Weight | Out Date | Out Time | Out Weight | Operator | Net Weight |
|----|------------|---------|----------|-----------|------------|----------|------------|----------|------------|
| 1 | 10/19/2005 | 10:15 | CW | 55120 | 10/19/2005 | 10:30 | 14240 | CW | 40880 |
| 2 | 10/25/2005 | 13:27 | SB | 62800 | 10/25/2005 | 16:27 | 35420 | SB | 27380 |

^{**} This scale is calibrated every month by authorized personnel

RECEIVED

APR 24 2006

CLEAN HARBORS DEER PARK, LP CERTIFICATE OF DISPOSAL

RUN DATE 04/18/06 RUN TIME 5:00 PM

PAGE: 1

Certificate of Disposal Stream Order Manifest Received Name and Address Number Number Date

BAYONNE BARREL & DRUM SITE

CH99425B FZ1029912 TX3480999 10/25/05

DEMAXIMIS, INC

186 CENTER ST SUITE 290 CLINTON, NJ 08809 ATTN: WILLIAM LEE

| Inventory | Customer's Unique | | CONTAINER | SHP | Dispo | sal |
|-----------|---|------|-----------|-----|--------|----------|
| Cntrl Nbr | Serial Number | Туре | Contents | To | Method | Date |
| 7633049 | *************************************** | CM | CHSI | | I (| 04/08/06 |

Total Containers: 1

THE ABOVE-REFERENCED WASTE WAS PROCESSED AND DISPOSED OF, IN ACCORDANCE WITH 40 CFR 761, AND THE FACILITY'S TSCA AUTHORIZATION.

CLEAN HARBORS DEER PARK, LP. CERTIFICATE OF DISPOSAL

RUN DATE: 04/18/06 RUN TIME: 5:00 PM

PAGE: 2

Disposal Method

'I' - Waste that was Incinerated

'L' - Waste that was Landfilled

'O' - Offsite Disposal
'C' - Offsite Reclamation

Disposal Facility

CLEAN HARBORS DEER PARK, LP

2027 BATTLEGROUND ROAD

LAPORTE, TX 77571

EPA ID

TXD055141378

Under civil and criminal penalties of law for making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615). I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section (s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate, and complete.

Please call (281) 930-2315 if there are any questions concerning the information on this Certificate of Disposal.

Authorized Agent

CLEAN HARBORS DEER PARK, LP

TEXAS COMMISSION GIV ENVIRONMENTAL QUALITY P.O. Box 13087

Austin, Texas 78711-3087



REC . -

FZ1029912

Please print or type. (Form designed for use on eilte (12-pitch) typewriter.)

DCT 3 1 2005 Porm approved. OMB No. 2050-0039.

| UNIFORM HAZARDOUS 1. Generator's US EPA WASTE MANIFEST N J D 0 0 9 8 | ID No. | Manifest
Document | 2. Pag
of | To the contract | | the shaded areas |
|--|---|--|--|--|--|--|
| Steperators Name and Mailing Address Site Address: 8tte Address: 150 Raymond Boulet ATTN: William Lee | | 80444 | | te Manifest Doc
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199 | lumber |
| Canaon, NJ, USBU9 | | | | ne Generators II |)
), (1) | D0034 |
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| In Darie TV 77674 | 0055 | 4-1-3-7-8 | 4.0 | City of the control o | | (281) 930-2300 |
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HONE | #: (800) 483-371 |
| J. Additional Descriptions for Materials (Instructional Information 11a. CH994258) 15. Special Handling Instructions and Additional Information 11a.ERG#171 (S).(E) WASTE ASH PILES **Dec # 17244 Decal # 980 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of | this consignment | are fully and accura | EN 1791 | IERGENCY PI | OUD
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FZ1029912 Please print or type. (Fc. in designed for use on elite (12-pitch) typewrite PPW 08/25/2005 Form Approved. OMB No. 2050-0039. UNIFORM HAZARDOUS 21. Generator's US EPA ID No. Manifest Document No. 22. Page Information in the shaded **WASTE MANIFEST** areas is not required by Federal 80999 NJD009871401 2 of 2 (Continuation Sheet) law. 23. Generator's Name L. State Manifest Document Number Bayonne Barrel & Drum Site TX3480999 ATTN: William Lee M. State Generator's ID De Maximis, Inc., 186 Center Street Suite 290 Clinton, NJ 08809 D0034 24. Transporter Company Name 25. US EPA ID Number N. State Transporter's ID N E D 0 0 1 7 9 2 9 1 0 D Transporter's Phone Union Pacific Railroad (402) 661-6829 26. Transporter Company Name 27. US EPA ID Number P. State Transporter's ID Q: Transporter's Phone 31. Unit Wt/Vol 29. Containers 30. Total R: Waste No. 28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) Type No. Quantity b. C. d. e. g. h. S: Additional Descriptions for Materials Listed Above T Handling Codes for Wastes Listed Above 32. Special Handling Instructions and Additional Information 33. Transporter Acknowledgement of Receipt of Materials Date Printed/Typed Name Signature Month Day Year 34. Transporter Acknowledgement of Receipt of Materials Date Printed/Typed Name Signature Month Day Year

35. Discrepancy Indication Space

CLEAN HARBORS DEER PARK, LP CERTIFICATE OF DISPOSAL

RUN DATE 02/28/06 RUN TIME 12:00 PM

PAGE: 1

Certificate of Disposal

Name and Address Number Number Number Number Number

Manifest

Date

BAYONNE BARREL & DRUM SITE

DEMAXIMIS, INC

186 CENTER ST SUITE 290

CLINTON, NJ 08809

ATTN: WILLIAM LEE

CH99425B FZ1029912 TX3481000 11/10/05

| Inventory | Customer's Unique | | CONTAINER | SHP | Disp | osal |
|-----------|-------------------|------|-----------|-----|--------|----------|
| Cntrl Nbr | Serial Number | Туре | Contents | To | Method | Date |
| 7720650 | | CM | CHSI | | 1 | 02/24/06 |

Total Containers: 1

THE ABOVE-REFERENCED WASTE WAS PROCESSED AND DISPOSED OF, IN ACCORDANCE WITH 40 CFR 761, AND THE FACILITY'S TSCA AUTHORIZATION.

CLEAN HARBORS DEER PARK, LP. CERTIFICATE OF DISPOSAL

RUN TIME: 12:00 PM PAGE: 2

Disposal Method: "I' - W

'I' - Waste that was Incinerated 'L' - Waste that was Landfilled

'O' - Offsite Disposal
'C' - Offsite Reclamation

Disposal Facility :

RUN DATE: 02/28/06

CLEAN HARBORS DEER PARK, LP 2027 BATTLEGROUND ROAD

LAPORTE, TX 77571

EPA ID :

TXD055141378

Under civil and criminal penalties of law for making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615). I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section (s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate, and complete.

Please call (281) 930-2315 if there are any questions concerning the information on this Certificate of Disposal.

Authorized Agent

CLEAN HARBORS DEER PARK, LP

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY P.O. Box 13087

Austin, Texas 78711-3087



| UNIFORM HAZARDOUS 1. Generator's US EPA ID No. | Manifest | 2. Pag
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| 3. Generator's Name and Mailing Address Beyonne Barrel & Drum Site 150 Raymond Boulevard ATTN: William Lee De Modrinis, Inc. 186 Center Street Sulleways, NJ 07105 Cinton, NJ 08809 4. Generator's Phone (908) 735-9315 | | | 3/4 <u>/8/</u> | .(0 <u>1</u> 0)(| j <u>.</u> |
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FZ1029912

Please print or type. (Form designed for use on elite (12-pitch) typewrite PPW 08/25/2005

Form Approved, OMB No. 2050-0039.

| TTN: William Lee e Maximis, Inc., 186 Center Street Suite : limbs, N.J. 08803 Transporter Company Name | 25. US EPA ID N | | M Sign | ត មិនតែក្រោយក្នុះ !
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Main Gate Truck Scale

Current Date 11/10/2005

Clean Harbors Deer Park, LP, 2027 Battleground Rd

P.O. Box 609, Deer Park, TX 77536

(281) 930-4508 PH

(281) 930-4516 FAX

Current Time

Current Weight Transaction

Bill of Lading

279489

Additional BOL

Manifest#

3481000

HO#

99425

Customer

Bayonne B&D

Pickup Location

Clinto, NJ

Container

EPIU222155

Equipment Type

Bin

Transporter

to Facility

CHDE

Inbound Scale Operator

SB

Oubound Scale Operator

SB

Inbound Plant Driver

GARY

YM

Outbound Plant

GARY

Driver Outbound Truck

YM

Inbound Truck

ID#

ID# Out Date

11/10/2005

In Date In Time

9:15

11/10/2005

Out Time

9:35

In Weight

71620

Out Weight

14240

Net Weight 57380

Comments .

20 YD IM RT BIN

Scale operator signature of complete transaction:

No. of weights for this BOL = 1

Total Weight Summary

| No | In Date | In Time | Operator | In Weight | Out Date | Out Time | Out Weight | Operator | Net Weight |
|----|------------|---------|----------|-----------|------------|----------|------------|----------|------------|
| 1 | 11/10/2005 | 9:15 | SB | 71620 | 11/10/2005 | 9:35 | 14240 | SB | 57380 |

^{**} This scale is calibrated every month by authorized personnel

CLEAN HARBORS DEER PARK, LP CERTIFICATE OF DISPOSAL

RUN DATE 01/05/06 RUN TIME 5:30 PM

PAGE: 1

Certificate of Disposal Name and Address Stream Order Manifest Received Number Number Date

BAYONNE BARREL & DRUM SITE DEMAXIMIS, INC

186 CENTER ST SUITE 290

CLINTON, NJ 08809

ATTN: WILLIAM LEE

CH99425B FZ1029912 TX3481001 11/10/05

Inventory Customer's Unique Cntrl Nbr Serial Number

Type Contents

SHP Disposal To Method Date

7720281

CM CHSI

I 01/03/06

Total Containers: 1

THE ABOVE-REFERENCED WASTE WAS PROCESSED AND DISPOSED OF, IN ACCORDANCE WITH 40 CFR 761, AND THE FACILITY'S TSCA AUTHORIZATION.

CLEAN HARBORS DEER PARK, LP. CERTIFICATE OF DISPOSAL

RUN DATE: 01/05/06 RUN TIME: 5:30 PM

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PAGE: 2

Disposal Method

'I' - Waste that was Incinerated
'L' - Waste that was Landfilled

'O' - Offsite Disposal
'C' - Offsite Reclamation

Disposal Facility :

CLEAN HARBORS DEER PARK, LP 2027 BATTLEGROUND ROAD LAPORTE, TX 77571

Under civil and criminal penalties of law for making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615). I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section (s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate, and complete.

Please call (281) 930-2315 if there are any questions concerning the information on this Certificate of Disposal.

Authorized Agent

CLEAN HARBORS DEER PARK, LP

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY P.O. Box 13087

FZ1029912 PPW 08/25/2005

Form approved, OMB No. 2050-0039.

Austin, Texas 78711-3087
Please print or type. (Form designed for use on sitts (12-pitch) typewriter.)

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WEIGHED ON A FAIRBANKS SCALE MASCI REALTY, INC.

OPEN DAILY 7 a.m. - 6 p.m. Phone: 973-589-4176

| DATE 128 DOREMUS AV | /E., NEWARK, N.J. 07105 Fax: 973-589-307 |
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Main Gate Truck Scale

Current Date 11/10/2005

Clean Harbors Deer Park, LP , 2027 Battleground Rd

P.O. Box 609, Deer Park, TX 77536

(281) 930-4508 PH

(281) 930-4516 FAX

Current Time 17:25

Current Weight Transaction

| Bill of Lading | 279490 | Additional BOL | | | | |
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| Manifest# | 3481001 | но# | 99425 | | | |
| Customer | Bayonne B&D | Pickup Location | Newark, NJ | | | |
| Container | EPIU222376 | Equipment Type | Bin | | | |
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to Facility | CHDE | Problem Serverity do Mag | agitive. | | | |
| Inbound Scale
Operator | SB | Oubound Scale
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| Inbound Truck
ID# | YM | Outbound Truck
ID# | YM | | | |
| In Date | 11/10/2005 | Out Date | 11/10/2005 | | | |
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| In Weight | 68900 | Out Weight | 14240 | | | |
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Net Weight 54660

Comments

20 YD IM RT BIN

Scale operator signature of complete transaction:

No. of weights for this BOL = 1

Total Weight Summary

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^{**} This scale is calibrated every month by authorized personnel

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION II

IN THE MATTER OF: Bayonne Barrel & Drum Superfund Site Newark, New Jersey

Akzo Nobel Coatings, Inc. (for Reliance Universal), Alumax Mill Products, Inc. (on behalf of Howmet Aluminum Corporation), BASF Corporation, Borden Chemical, Inc., Chemical Waste Management, Inc. (as successor to SCA Chemical Services, Inc.), Chevron Environmental Management Company for itself and on behalf of Kewanee Industries, Inc. (for Colonial Printing Ink, Inc., U.S. Printing Ink, Inc., Onyx Chemical Company and Copygraphics), Conopco, Inc. (as successor to CPC International, Inc. and d/b/a Ragu Foods, Inc., Chesebrough Pond's, Inc., and Lever Brothers Company), D.A. Stuart Oil Company, E.I. du Pont de Nemours and Company, Engelhard Corporation, Ford Motor Company, General Motors Corporation, Hoffman-La Roche Corporation, Honeywell International, Inc., ICI Americas Inc., Johnson & Johnson (for Personal Care Products Group, Inc.), Kurz-Hastings, Inc., Millennium Petrochemicals, Inc. (for U.S. Industrial Chemicals, PL), Minnesota Mining & Mfg. Co. (a/k/a 3M Company), National Starch & Chemical Co., Nestlé USA, Inc. (for Buitoni Foods), PPG Industries, Inc., PRC-DeSoto International, Inc. (f/k/a Products Research & Chemical Corporation), Pharmacia Corporation (f/k/a Monsanto Company), Reckitt Benckiser, Inc. (for Airwick Industries, Inc.), Reichhold, Inc., Rexam Beverage Can Company/MRC Holdings, Inc. (on behalf of American Can Co.), Sequa Corporation/ Sun Chemical Corporation, Solvent Recovery Services of New Jersey, Inc., Technical Coatings Co., The Sherwin-Williams Company, The Valspar Corporation (for Lilly Industries, Inc.), Tuscan/Lehigh Dairies, Inc. (f/k/a Tuscan Lehigh Dairies, L.P.), U.S. Plastic Lumber Corporation (o/b/o its former division, S&W Waste, Inc.), Volkswagen of America, Inc., Whittaker Corporation, and Zeneca, Inc. (for Converter's Ink Company),

Settling Parties.

AGREEMENT FOR RECOVERY OF PAST RESPONSE COSTS

U.S. EPA Region II CERCLA Docket No. 02-2004-2023

Proceeding Under Section 122(h) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. § 9622(h)

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I. JURISDICTION

- 1. This Agreement is entered into pursuant to the authority vested in the Administrator of the U.S. Environmental Protection Agency ("EPA") by Section 122(h)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9622(h)(1), which authority has been delegated to the Regional Administrators of the EPA by EPA Delegation No. 14-14-D. This Agreement is also entered into under the authority of the Attorney General of the United States to compromise and settle claims of the United States.
- 2. This Agreement is made and entered into by EPA, and the thirty-seven (37) parties listed in Appendix C ("Settling Parties"). Each Settling Party consents to and will not contest EPA's authority to enter into this Agreement or to implement or enforce its terms.

II. BACKGROUND

- 3. This Agreement concerns the Bayonne Barrel & Drum Superfund Site ("Site") located at 150-154 Raymond Boulevard in Newark, Essex County, New Jersey. EPA alleges that the Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).
- 4. The Site was operated by Bayonne Barrel & Drum Co. as a metal barrel and drum reconditioning facility from the early 1940's until the early 1980's. In July 1994, EPA commenced a removal action at the Site.
- 5. Certain waste materials identified at the Site, including but not limited to polychlorinated biphenyls ("PCBs"), dioxin and lead, are hazardous substances as defined by CERCLA Section 101(14), 42 U.S.C. § 9601(14). PCBs and dioxins are defined as hazardous substances by regulations found at 40 C.F.R. § 302.4, table 302.4. Also, the ash and soil at the Site exhibit the characteristic of toxicity for lead and cadmium according to RCRA § 3001, as defined in 40 C.F.R. § 261.24, and therefore are hazardous substances.
- 6. As a result of the release or threatened release of hazardous substances, EPA has undertaken response actions at or in connection with the Site under Section 104 of CERCLA, 42 U.S.C. § 9604, and may undertake response actions in the future. Response activities undertaken at the Site to date include, but are not limited to:
 - * Site security was established, fencing repaired and additional fencing and gates erected;
 - * three-hundred fifty seven (357) drums in building No. 2 were removed, over packed, sampled and transported from the Site for disposal;
 - * sixty (60) cubic yards of ash in building No. 2 were removed, sampled, secured in rolloffs and transported from the Site for disposal;
 - * six (6) pits, uncovered after the removal of the drums and ash from building No. 2, were excavated and the material secured in roll-offs, sampled and transported from the Site for disposal;

- * seven (7) tanks were sampled and analyzed, and the contents of four tanks containing fourteen-thousand five-hundred gallons of liquid hazardous wastes were removed and transported from the Site for disposal;
- * six (6) furnace area soil samples were collected and submitted for organics, metals and dioxin analysis;
- * twenty-one (21) ash pile samples were collected, composited and submitted for organics, metals and dioxin analysis, two (2) ash piles containing elevated dioxin concentrations were removed and transported from the Site for disposal;
- * six (6) exterior ash piles were covered to prevent exposure to the elements and direct access/physical contact;
- * seven hundred seven (707) tons of whole and scrap tires were removed from the Site for recycling;
- * two (2) gas cylinders were removed from the Site;
- * thirty-eight thousand, three hundred ninety-nine (38,399) steel drums were inspected, shredded and transported from the Site for recycling, generating six-hundred and thirty-nine (639) tons of scrap steel;
- * two thousand, one hundred (2,100) gallons of liquid hazardous wastes were removed from drums from the "empty" drum piles, tested to determine their hazard category, bulked, sampled and transported from the Site for disposal;
- * approximately sixty (60) drums containing residual amounts of cyanide liquids were treated on-site;
- * eight thousand, one hundred twenty (8,120) poly drums and liners were removed from the Site and disposed of:
- * seven-hundred and one (701) drums of hazardous wastes were tested to determine their hazard category, screened for PCBs, bulked, sampled and transported from the Site for disposal; and
- * groundwater monitoring wells were installed and sampled.
- 7. In performing these response actions, EPA has incurred and will continue to incur response costs at or in connection with the Site. As of January 31, 2003, EPA had incurred \$2,986,500 in costs.
 - 8. EPA alleges that Settling Parties are responsible parties pursuant to Section 107(a) of

CERCLA, 42 U.S.C. § 9607(a), and are jointly and severally liable for response costs incurred or to be incurred at or in connection with the Site.

- 9. On July 1, 2003, the Settling Parties entered into a Site Participation Agreement pursuant to which certain Settling Parties (the "Cash-Out Parties") made payments to other Settling Parties (the "Performing Parties"), and the Performing Parties, among other things, agreed to indemnify the Cash-Out Parties for EPA's Past Response Costs. Payments made by the Cash-Out Parties will be used by the Performing Parties to fund their obligations to EPA with respect to the Site, including to perform response actions and to make payments required by this Agreement.
- 10. On December 22, 2003, EPA and the Performing Parties entered into an Administrative Order on Consent for a Removal Action, Docket No. CERCLA-02-2004-2006, pursuant to which the Performing Parties have committed to perform certain removal activities. The Settling Parties also intend to enter into a binding agreement with EPA, either an administrative order on consent or a consent decree, at EPA's discretion (the "Final Agreement"), to perform additional removal activities at the Site as approved by EPA, and a separate agreement with the New Jersey Department of Environmental Protection ("NJDEP").
- 11. EPA and Settling Parties recognize that this Agreement has been negotiated in good faith and that this Agreement is being entered into without the admission or adjudication of any issue of fact or law.

III. PARTIES BOUND

12. This Agreement shall be binding upon EPA and upon Settling Parties and their successors and assigns, except that, where specified, certain provisions of this Agreement shall be binding only upon EPA and upon Performing Parties and their successors and assigns. Any change in ownership or corporate or other legal status of a Settling Party, including but not limited to any transfer of assets or real or personal property, shall in no way alter such Settling Party's responsibilities under this Agreement. Each signatory to this Agreement certifies that he or she is authorized to enter into the terms and conditions of this Agreement and to bind legally the party represented by him or her.

IV. DEFINITIONS

- 13. Unless otherwise expressly provided herein, terms used in this Agreement that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meanings assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Agreement or in any appendix attached hereto, the following definitions shall apply:
- a. "Agreement" shall mean this Agreement and any attached appendices. In the event of conflict between this Agreement and any appendix, the Agreement shall control.

- b. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9601, et seq.
 - c. "Cash-Out Parties" shall mean those parties identified in Appendix A.
- d. "Day" shall mean a calendar day. "Business day" shall mean a day other than a Saturday, Sunday or federal holiday. In computing any period of time under this Agreement, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.
- e. "EPA" shall mean the United States Environmental Protection Agency and any successor departments, agencies or instrumentalities of the United States.
- f. "Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.
- g. "NJDEP" shall mean the New Jersey Department of Environmental Protection and any successor departments, agencies or instrumentalities of the State of New Jersey.
- h. "Paragraph" shall mean a portion of this Agreement identified by an Arabic numeral or a lower case letter.
 - i. "Parties" shall mean EPA and Settling Parties.
- j. "Past Response Costs" shall mean all costs, including but not limited to direct and indirect costs, that EPA or the U.S. Department of Justice on behalf of EPA has paid at or in connection with the Site through January 31, 2003, plus accrued Interest on all such costs through such date.
 - k. "Performing Parties" shall mean those parties identified in Appendix B.
- 1. "RCRA" shall mean the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 U.S.C. § 6972, et seq.
- m. "Section" shall mean a portion of this Agreement identified by a Roman numeral.
 - n. "Settling Parties" shall mean those parties identified in Appendix C.
- o. "Site" shall mean the Bayonne Barrel & Drum Superfund Site, located at 150-154 Raymond Boulevard in Newark, New Jersey, a parcel of property of approximately 15 acres

also known as Block 5002, Lots 3, 5, 14 and 16 on the Tax Map of the City of Newark, and the areal extent of the contamination from the property, including any properties to which hazardous substances have migrated or threaten to migrate. The Site is depicted generally on the map attached as Appendix D.

p. "United States" shall mean the United States of America, including its departments, agencies and instrumentalities.

V. PAYMENT OF RESPONSE COSTS

- 14. Within 30 days of the effective date of this Agreement, Performing Parties shall pay to EPA \$500,000, plus an additional sum for Interest on that amount calculated from January 31, 2003 through the date of payment.
- 15. On or before January 31, 2005 ("Second Payment Date"), Performing Parties shall pay to EPA \$300,000, plus an additional sum for Interest on that amount calculated from January 31, 2003 through the Second Payment Date.
- 16. Within 540 days of the effective date of this Agreement ("Final Payment Date"), Performing Parties shall pay to EPA \$2,186,500 minus an orphan share credit (the "Final Payment"). The orphan share credit shall be 25 percent of the sum of:
 - (i) the actual cost of the removal activities identified on Appendix E that the Performing Parties have performed pursuant to Administrative Order on Consent Docket No. CERCLA-02-2004-2006; and
 - (ii) the estimated cost of the response actions (as that term is defined in CERCLA and the National Contingency Plan, 40 C.F.R. Part 300) that Settling Parties have committed to perform as of the Final Payment Date pursuant to the Final Agreement;

provided, however, that: (a) if the Settling Parties have not been able to obtain the approval of NJDEP by the Final Payment Date, and therefore have not executed the Final Agreement, EPA may, in its discretion, extend the Final Payment Date; b) the determination of the amount of the Final Payment shall be made by EPA in its unreviewable discretion; and c) the orphan share credit shall under no circumstances exceed \$2,186,500. Performing Parties shall pay an additional sum for Interest on the Final Payment amount calculated from January 31, 2003 through the date of payment.

17. Payment shall be made to EPA by Electronic Funds Transfer ("EFT") in accordance with current EFT procedures. To effect this payment via EFT, Settling Parties shall instruct their bank to remit payment via EFT to EPA's account with Mellon Bank, providing their bank with the following information:

- i. Amount of payment
 - ii. Title of Mellon Bank account to receive payment: EPA
 - iii. Account code for Mellon Bank account receiving the payment: 9108544
 - iv. Mellon Bank ABA routing Number: 043000261
 - v. Name of remitter
- vi. Site/spill identifier: 029J
- 18. At the time of payment, Performing Parties shall also send notice that payment has been made to EPA in accordance with Section XII (Notices and Submissions). Such notice shall reference the name and address of the party(ies) making payment, the Site name, the EPA Region and Site/Spill ID Number 02-9J and the EPA docket number for this action.
- 19. The total amount to be paid pursuant to Paragraphs 14 and 15, and Paragraph 16 (if any), shall be deposited in the Bayonne Barrel & Drum Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

VI. FAILURE TO COMPLY WITH AGREEMENT

20. <u>Interest on Late Payments</u>. If the Performing Parties fail to make the payments required by Paragraphs 14, 15, and 16 by the required due dates, Interest shall continue to accrue on the unpaid balances through the date of payment.

21. Stipulated Penalty.

a. If any amounts due to EPA under Paragraphs 14, 15 and 16 are not paid by the required date, Performing Parties shall be in violation of this Agreement and shall pay to EPA, as a stipulated penalty, in addition to the Interest required by Paragraph 20, the following penalties per violation per day that such payment is late:

| Penalty Per Violation | Period of Noncompliance | | | |
|-----------------------|-------------------------|--|--|--|
| Per Day | | | | |
| \$500 | 1st through 14th day | | | |
| \$1,000 | 15th day and beyond | | | |

- b. Stipulated penalties are due and payable within 30 days of the date of demand for payment of the penalties by EPA. Payment shall be made to EPA, for deposit in the EPA Hazardous Substance Superfund, by EFT as described above in Paragraph 17.
- c. At the time of each payment, Performing Parties shall also send notice that payment has been made to EPA in accordance with Section XII (Notices and Submissions). Such

notice shall reference the name and address of the party(ies) making payment, the Site name, the EPA Region and Site/Spill ID Number 02-9J and the EPA docket number for this action.

- d. Following EPA's determination that Performing Parties have failed to comply with a requirement of this Order, EPA may give Performing Parties written notification of the failure and describe the noncompliance, and may send Performing Parties a written demand for payment of the penalties. Penalties shall accrue as provided in this Paragraph regardless of whether EPA has notified Performing Parties of the violation or made a demand for payment, but need only be paid upon demand. All penalties shall begin to accrue on the day after payment is due and shall continue to accrue through the date of payment. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Agreement.
- 22. In addition to the Interest and Stipulated Penalty payments required by this Section and any other remedies or sanctions available to EPA by virtue of Settling Parties' failure to comply with the requirements of this Agreement, any Settling Party who fails or refuses to comply with the requirements of this Agreement shall be subject to enforcement action pursuant to Section 122(h)(3) of CERCLA, 42 U.S.C. § 9622(h)(3). If the United States, on behalf of EPA, brings an action to enforce this Agreement, Settling Parties shall reimburse the United States for all costs of such action, including but not limited to costs of attorney time.
- 23. The obligations of Performing Parties to pay amounts owed to EPA under this Agreement are joint and several. In the event of the failure of any one or more Performing Parties to make the payments required under this Agreement, the remaining Performing Parties shall be responsible for such payments.
- 24. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive payment of all or any portion of the stipulated penalties that have accrued pursuant to this Agreement. Payment of stipulated penalties shall not excuse Performing Parties from payment as required by Section V or from performance of any other requirements of this Agreement.

VII. COVENANT NOT TO SUE BY EPA

25. Covenant Not to Sue by EPA. Except as specifically provided in Section VIII (Reservations of Rights by EPA), EPA covenants not to sue or take administrative action against Settling Parties pursuant to Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), to recover Past Response Costs. This covenant shall take effect upon receipt by EPA of all amounts required by Section V (Payment of Response Costs) and any amounts due under Section VI (Failure to Comply with Agreement). This covenant not to sue is conditioned upon the satisfactory performance by Settling Parties of their obligations under this Agreement. This covenant not to sue extends only to Settling Parties and does not extend to any other person.

VIII. RESERVATIONS OF RIGHTS BY EPA

- 26. EPA reserves, and this Agreement is without prejudice to, all rights against Settling Parties with respect to all matters not expressly included within the Covenant Not to Sue by EPA in Paragraph 25. Notwithstanding any other provision of this Agreement, EPA reserves all rights against Settling Parties with respect to:
 - a. liability for failure of Settling Parties to meet a requirement of this Agreement;
- b. liability for costs incurred or to be incurred by the United States that are not within the definition of Past Response Costs;
- c. liability for injunctive relief or administrative order enforcement under Section 106 of CERCLA, 42 U.S.C. § 9606;
 - d. criminal liability; and
- e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments.
- 27. Nothing in this Agreement is intended to be nor shall it be construed as a release, covenant not to sue, or compromise of any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the United States may have against any person, firm, corporation or other entity not a signatory to this Agreement.

IX. COVENANT NOT TO SUE BY SETTLING PARTIES

- 28. Settling Parties covenant not to sue and agree not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to Past Response Costs or this Agreement, including but not limited to:
- a. any direct or indirect claim for reimbursement from the EPA Hazardous Substance Superfund based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;
- b. any claims arising out of the response actions at or in connection with the Site for which the Past Response Costs were incurred, including any claim under the United States Constitution, the Constitution of the State of New Jersey, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; and
- c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to Past Response Costs, except to the extent that

the United States may be a "covered person" with respect to the Site under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

- 29. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. 300.700(d).
- 30. Settling Parties agree not to assert any claims and to waive all claims or causes of action that they may have for all matters relating to the Site, including for contribution, against any person where the person's liability to Settling Parties with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Site, or having accepted for transport for disposal or treatment of hazardous substances at the Site, if all or part of the disposal, treatment, or transport occurred before April 1, 2001, and the total amount of material containing hazardous substances contributed by such person to the Site was less than 110 gallons of liquid materials or 200 pounds of solid materials.
- 31. The waiver in Paragraph 30 shall not apply with respect to any defense, claim, or cause of action that a Settling Party may have against any person meeting the above criteria if such person asserts a claim or cause of action relating to the Site against such Settling Party. This waiver also shall not apply to any claim or cause of action against any person meeting the above criteria if EPA determines:
- a. that such person has failed to comply with any EPA requests for information or administrative subpoenas issued pursuant to Section 104(e) or 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) or 9622(e), or Section 3007 of RCRA, 42 U.S.C. § 6972, or has impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Site, or has been convicted of a criminal violation for the conduct to which this waiver would apply and that conviction has not been vitiated on appeal or otherwise; or
- b. that the materials containing hazardous substances contributed to the Site by such person have contributed significantly, or could contribute significantly, either individually or in the aggregate, to the cost of response action or natural resource restoration at the Site.

X. EFFECT OF SETTLEMENT/CONTRIBUTION PROTECTION

32. Except as provided in Paragraphs 28 and 30, nothing in this Agreement shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Agreement. Except as provided in Paragraphs 28 and 30, the Parties expressly reserve any and all rights (including, but not limited to, any right to contribution), defenses, claims, demands, and causes of action that they may have with respect to any matter, transaction, or occurrence relating

in any way to the Site against any person not a Party hereto.

- 33. EPA and Settling Parties agree that the actions undertaken by Settling Parties in accordance with this Agreement do not constitute an admission of any liability by any Settling Party. Settling Parties do not admit, and retain the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Agreement, the validity of the facts or allegations contained in Section II of this Agreement.
- 34. The Parties agree that Settling Parties are entitled, as of the effective date of this Agreement, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for "matters addressed" in this Agreement. The "matters addressed" in this Agreement are Past Response Costs.
- 35. Each Settling Party agrees that with respect to any suit or claim for contribution brought by it for matters related to this Agreement, it will notify EPA in writing no later than 60 days prior to the initiation of such suit or claim. Each Settling Party also agrees that, with respect to any suit or claim for contribution brought against it for matters related to this Agreement, it will notify EPA in writing within 10 days of service of the complaint or claim upon it. In addition, each Settling Party shall notify EPA within 10 days of service or receipt of any Motion for Summary Judgment and within 10 days of receipt of any order from a court setting a case for trial, for matters related to this Agreement.
- 36. In any subsequent administrative or judicial proceeding initiated by EPA, or by the United States on behalf of EPA, for injunctive relief, recovery of response costs, or other relief relating to the Site, Settling Parties shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenant not to sue by EPA set forth in Section VII.

XI. RETENTION OF RECORDS

- 37. Until 10 years after the effective date of this Agreement, each Settling Party shall preserve and retain all records, reports, or information (hereinafter referred to as "records") now in its possession or control, or which come into its possession or control, that relate in any manner to response actions taken at the Site or to the liability of any person under CERCLA with respect to the Site, regardless of any corporate document retention policy to the contrary.
- 38. At the conclusion of this document retention period, Settling Parties shall notify EPA at least 90 days prior to the destruction of any such records or documents, and, upon request by

EPA, Settling Parties shall make available to EPA any such records or documents and shall deliver to EPA such records or documents as EPA may request, at no cost to EPA. Settling Parties may assert that certain records are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Settling Parties assert such a privilege, they shall provide EPA with the following: 1) the title of the record; 2) the date of the record; 3) the name, title, affiliation (e.g., company or firm), and address of the author of the record; 4) the name and title of each addressee and recipient; 5) a description of the subject of the record; and 6) the privilege asserted. If a claim of privilege applies only to a portion of a record, the record shall be provided to EPA in redacted form to mask the privileged information only. Settling Parties shall retain all records that they claim to be privileged until EPA has had a reasonable opportunity to dispute the privilege claim and any such dispute has been resolved in Settling Parties' favor. However, no records created or generated pursuant to the requirements of this or any other settlement with the EPA pertaining to the Site shall be withheld on the grounds that they are privileged.

39. Each Settling Party hereby certifies individually that to the best of its knowledge and belief, after thorough inquiry, except as listed in Appendix F to this Order it has not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to its potential liability regarding the Site since notification of potential liability by the United States or the State or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA requests for information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

XII. NOTICES AND SUBMISSIONS

40. Whenever, under the terms of this Agreement, notice is required to be given or a document is required to be sent by one Party to another, it shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change to the other Parties in writing. Written notice as specified herein shall constitute complete satisfaction of any written notice requirement of this Agreement with respect to EPA and Settling Parties.

As to EPA:

United States Environmental Protection Agency Emergency and Remedial Response Division Removal Action Branch 2890 Woodbridge Avenue Bldg. 209 (MS-211) Edison, NJ 08837 Attention: Joseph Cosentino, On-Scene Coordinator and

Sarah P. Flanagan, Esq.
Assistant Regional Counsel
New Jersey Superfund Branch
Office of Regional Counsel
United States Environmental Protection Agency
290 Broadway, 17th Floor
New York, New York 10007-1866

with a copy to:

Donna Vizian
Chief, Financial Management Branch
U.S. Environmental Protection Agency
Region II
290 Broadway, 29th Floor
New York, NY 10007-1866

As to Settling Parties:

William H. Hyatt, Jr., Esq. Kirkpatrick & Lockhart LLP One Newark Center Tenth Floor Newark, New Jersey 07102

XIII. INTEGRATION/APPENDICES

41. This Agreement and its appendices constitute the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Agreement. The Parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Agreement. The following appendices are attached to and incorporated into this Agreement: Appendix A is a complete list of the Cash-Out Parties; Appendix B is a complete list of the Performing Parties; Appendix C is a complete list of the Settling Parties; Appendix D is the map of the Site; Appendix E is the list of removal activities to be included in one element of EPA's determination of the amount by which the Settling Parties' Final Payment will be reduced, in accordance with Section V; Appendix F is the list of documents excepted from Paragraph 39.

XIV. PUBLIC COMMENT

42. This Agreement shall be subject to a public comment period of not less than 30 days pursuant to Section 122(i) of CERCLA, 42 U.S.C. § 9622(i). In accordance with Section 122(i)(3) of CERCLA, EPA may modify or withdraw its consent to this Agreement if comments received disclose facts or considerations which indicate that this Agreement is inappropriate, improper or inadequate.

XV. ATTORNEY GENERAL APPROVAL

43. The Attorney General or his designee has approved the settlement embodied in this Agreement in accordance with Section 122(h)(1) of CERCLA, 42 U.S.C. § 9622(h)(1).

XVI. EFFECTIVE DATE

44. The effective date of this Agreement shall be the date upon which EPA issues written notice that the public comment period pursuant to Paragraph 42 has closed and that comments received, if any, do not require modification of or EPA withdrawal from this Agreement.

IT IS SO AGREED:

| ВУ: | Jane M. Kenny Regional Administrato Region II |
|-----|---|
| _ | U.S. Environmental Protection Agency |

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| | | | | | | | | | |

BAYONNE BARREL

Agreement for Recovery of Past Response Costs U.S. Environmental Agency, Region II CERCLA Docket No. 02-2004-2023

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

| | Nobel Coatings Inc. Settling Party |
|------------------|------------------------------------|
| | |
| 2031 1 | Nelson Miller Parkway |
| | Settling Party |
| Louisy | ville, KY 40223 |
| / | 1 Outel 100 |
| M/d
Signature | regastioner / 1866 |
| 215.1 | |

Douglas W. Butler/Terrance R. Francek Printed Name of Signatory

Senior Environmental Affairs Mgr./V.P. Finance

Title of Signatory

| Alumax Mill Products, Inc. (on behalf of Howme | t Aluminum Corporation) |
|--|-------------------------|
| Name of Settling Party | |
| 201 Isabella Street
Pittsburgh, PA 15212 | |
| Address of Settling Party | |
| Signature J. Vices | |
| Lonnie F. Nicol | |
| Printed Name of Signatory | |
| Vice President | |
| Title of Signatory | |
| July 15, 2004 | |
| Date | |

| BASE CORPORATION | |
|--|---|
| Name of Settling Party | |
| 3000 Continental Drive - North
Mt. Olive, NJ 07828-1234 | |
| Address of Settling Party | |
| Nau Burnardo | |
| Signature | |
| Nan Bernardo | |
| Printed Name of Signatory | |
| Environmental Counsel | - |
| Title of Signatory | |
| July 14, 2004 | |
| Date | |

| (3 | BORDEN CHOMICAL INC |
|-------------|-----------------------|
| | Settling Party |
| | |
| | 80 E. BROWN ST. |
| Address | of Settling Party |
| - 0 | JOCUM 345, 0412 43215 |
| | 7,213 |
| C | Mula Somin |
| Signature | 5 0 |
| C | RICHARD SPAINCE |
| Printed N | ame of Signatory |
| D | 128270R- ELLIS |
| Title of Si | |
| 7-12 | -04 |
| Date | |

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

A Liberty Lane West, Hampton, NH 03842

Address of Settling Party

Signature

Stephen T. Jovce

Printed Name of Signatory

Director-CSMG

Title of Signatory

July 21, 2004

Date

Chemical Waste Management, Inc., as successor to SCA Chemical Services. Inc.

Name of Settling Party

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

Chevron Environmental Management Co. for itself and on behalf of

Kewanee Industries, Inc. for (Colonial Printing Ink, Inc., U.S. Printing

Name of Settling Party

Ink, Inc., Onyx Chemical Company
and Copygraphics).

| 6001 Bollinger Canyon Road | |
|---|--|
| Address of Settling Party K-2056 | |
| San Ramon, CA 94583 | |
| Mah & Soulk | |
| MARK P. STELLA | |
| Printed Name of Signatory Superfund Specialist | |
| Title of Signatory | |
| 12, July 2004 | |
| Date | |

| Conopco, Inc. (as successor to CPC Intern | ational, Inc. and |
|--|---|
| d/b/a Ragu Foods, Inc., Cheesebrough Pond
Lever Brothers Company) | 's, Inc., and |
| Name of Settling Party | |
| 700 Sylvan Avenue | |
| Englewood Cliffs, NJ 07632 | |
| Address of Settling Party | - |
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| | |
| F 8 5 62 | |
| The Dealers of | |
| Signature | |
| Andrew Shakalis | 27.4 |
| Printed Name of Signatory | Compare tal & Sately as incharse
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you foods, the Chese brangh fords In
tois Company) |
| Historicate General Courses - Co | March 100 Ent 100 Supplessor to |
| creinternetter, Inc. and Re | ye forts inc Chese brangh forts In |
| Title of Signatory Con Lever Boot | to 3 Company) |
| | |
| Date / / | |

| D. A. Stuart Oil Company |
|---|
| Name of Settling Party |
| 4580 Weaver Parkway |
| 4580 Weaver Parkway Address of Senling Party Warren ville, IL 60555 |
| 51 |
| Signature 3 1: |
| Eugene Carline Printed Name of Signatory |
| Vice President - Manufacturing Title of Signatory |
| 7-20-04
Date |
| Date |

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E. I. du Pont de Nemours and Company | mpan |
| E. I. du Pont de Nemours and Company | 1.9501.9 |
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| Legal Department, Room D7082 | |
| 100 Market Street | |
| Address | |
| Wilmington, DE 19898 | |
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| Bernard & Reelly | |
| Signature | |
| R = 0.01 | |
| Bernard J. Reilly | |
| restrated of the try | |
| Bernard Reilly | |
| | |
| Corporate Councel | |
| Corporate Counsel | |
| A second | |
| Aug 3 2004 | |
| Date | |

| I-NGELHARD CORPORATION |
|--|
| Name of Settling Party |
| 101 WOOD AUTINGE |
| Address of Settling Party P.O. P.O. 770 |
| TSELIN NT 08830-0770 |
| Sant Tilleaunt |
| Signature |
| SCOTT W. CLEARLATER Printed Name of Signatory |
| |
| DIRECTOR, ENUMENT HEALTH & SACETY Title of Signatory |
| July 13, 2004 |

| C/o Kathy J. Hofer
Suite 1500 PTW | |
|--|--|
| J-410 1500 F 100 | |
| ddress of Seuling Party Three Parklans Blud. | |
| Dearborn, MI 48126 | |
| gnature Thomas J. DeZure Assistant Secretary | |
| inted Name of Signatory | |

| General Motors Corporation | |
|----------------------------|--|
| Name of Settling Party | |
| 300 Renaissance Center | |
| Mail Code 482-C24-D24 | |
| Detroit, MI 48243 | |
| Address of Settling Party | |
| Micheller Jisher | |
| Signature | |
| Michelle T. Fisher | |
| Printed Name of Signatory | |
| _GM_Attomev | |
| Title of Signatory | |
| July 20, 2004 | |
| Date | |

THE UNDERSIGNED SETTLING PARTY enters into this Agreement in the matter of U.S. EPA Region II CERCLA Docket No. 02-2004-2023, relating to the Bayonne Barrel & Drum Superfund Site, City of Newark, Essex County, New Jersey.

FOR SETTLING PARTY: HOFFMANN-LA ROCHE INC.

Name)
340 RINGSLAND STREET, NUTLEY, N.J.

JULY 21, 2004 [Date]

FREDERICK C. KENIZ III

VICE PRESIDENT

Anpiv's As to room

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

Honeywell International, Inc.
Name of Settling Party

101 Columbia Road Morristown, NJ 07962

Address of Settling Party

Signature

John J. Morris

Printed Name of Signatory

Remediation Portfolio Director
Title of Signatory

August 9, 2004

Date

| Name of Settling Party | |
|--|---|
| ICI AMERICAS INC. | |
| Address of Settling Party 10 Finderne Avenue | |
| Bridgewater, New Jersey 08807 | |
| Signature E. MALOVRH | 1 |
| Printed Name of Signatory | |
| Vice President
Safety, Health & Environment | |
| Title of Signatory | |
| July 13, 2004 | |
| Date | |

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

Personal Products Company division of McNeil-PPE, Inc.

Name of Settling Party

Address of Settling Party

Coe Johnson + Johnson Plaza

New Bronswick, NJ 08933

Kathy a. Meisel

Printed Name of Signatory

Assistant Secretary, PPC

Title of Signatory

July 14, 2004

Date

| KURZ- HASTINGS, INC. | -5- |
|---------------------------|-----|
| Name of Settling Party | |
| 10901 DUTION ROAD | |
| Address of Settling Party | |
| PHILADERPHIA, PA 19154 | |
| Dail W. Syn | |
| Signature | |
| DAVID H. SHIPMBL | |
| Printed Name of Signatory | |
| VICE PRESIDENT | |
| Title of Signatory | |
| 8/11/04 | |
| Date | |

THE UNDERSIGNED SETTLING PARTY enters into this Agreement in the matter of U.S. EPA Region II CERCLA Docket No. 02-2004-2023, relating to the Bayonne Barrel & Drum Superfund Site, City of Newark, Essex County, New Jersey.

FOR SETTLING PARTY: Millenium Tetrochemicals Lac.

[Address]

Date

| 3M Company (f/k/a Minnesota Mining and Manufacturing Name of Settling Party | Company) |
|---|----------|
| 2N4 Carrier | |
| _3M Center | |
| _St. Paul, MN 55144-1000 | |
| Attn: Environmental LawyerAddress of Seuling Party | |
| R.a. tarelle | |
| Signature | |
| 4 | |
| Robert A. Paschke | |
| Printed Name of Signatory | |
| Manager, Corporate Environmental Programs | |
| Title of Signatory | |
| | |
| | |
| Date | |

| National Starch & Chemical Co
Name of Settling Party (Div. of Judo) | co. Juc |
|--|---------|
| | 3.0 |
| 10 Finderne Ave. Address of Settling Party | - |
| Bridgewater, NJ 088 | 707 |
| Alla Sam 9 | - |
| ALEXANDER M. SAMSON, J
Printed Name of Signatory | R |
| Counse/ Title of Signatory | |
| 7/18/04
Date | |

| Nestlé USA, Inc. (for Buitoni Foods) Name of Settling Party | |
|---|--|
| Address of Settling Party: | |
| 800 N. Brand Blvd. | |
| Glendale, CA 91203 | |
| Luclia M. Collar
Signature | |
| Noelia Marti-Colon | |
| Printed Name of Signatory | |
| Senior Counsel | |
| Title of Signatory | |
| -1.01.11 | |
| 7/17/04 | |
| Date | |

| Name | PG Industries, Inc. of Settling Party | |
|---------|---------------------------------------|---|
| | ONE PPG Place | |
| Addre | ss of Settling Party P, Hsburgh PA | _ |
| | | _ |
| Y | Mal E. Teil | |
| Signat | ure | |
| | MARK E. TERRE | |
| Printe | d Name of Signatory | |
| | Alcoul MAMAGE, RemedIATIO | 2 |
| Title c | f Signatory | |
| | 7/21/04 | |
| Date | | |

| Name of Settling Part | У | | | |
|------------------------|-------|-----|-----|---|
| P.O. Box 1800 | | | | |
| Glendale, CA 91209- | 1800 | | | |
| Address of Settling Pa | arty | - | | |
| 0 01 | 0 m | ١ | 1 | |
| Simeture | 1 11 | 101 | w Q | _ |
| Signature | | | | |
| David P. Morris | | | | |
| Printed Name of Signa | atory | | | |
| President and C.E.O. | | | | |
| Title of Signatory | | | | _ |
| 13 /xul | | 240 | 1.1 | |
| 12 121 | | | | |

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

Pharmacia Corporation (f.k.a. Monsanto Company)
Name of Settling Party

| c/o Monsanto Company (Attorney-in-Fac | et for Pharmacia Corporation) |
|--|-------------------------------|
| Address of Settling Party | |
| 800 North Lindberg Blvd | |
| - 1 | |
| St. Louis, MO 63167 | |
| \sim | |
| 1 | |
| MAL. | 12. |
| Signature | |
| Signature | |
| | |
| | |
| Jeffrey R. Klieve | |
| Printed Name of Signatory | |
| | |
| | |
| Director, Environmental Affairs, | |
| Monsanto Company, Attorney-in-Fact for | Pharmacia Corporation |
| Fitle of Signatory | Thamaela corporation |
| The of Bighatory | |
| 7/16/04 | |
| Date | |
| 1216 | |

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

Reckitt Benckiser, Inc. (for Airwick Industries, Inc.)
Name of Settling Party

| Morri | s Corporate Center IV |
|--------------|------------------------------------|
| Address of | Settling Party
nterpace Parkway |
| Parsi | ppany, New Jersey 07054-0225 |
| Signature | 2 Marlin am R. Mordán |
| | me of Signatory |
| Vice F | resident & General Counsel |
| Title of Sig | natory |
| July 1 | 3, 2004 |
| Date | |

THE UNDERSIGNED SETTLING PARTY enters into this Agreement in the matter of U.S. EPA Region II CERCLA Docket No. 02-2004-2023, relating to the Bayonne Barrel & Drum Superfund Site, City of Newark, Essex County, New Jersey.

FOR SETTLING PARTY:

REICHHOLD, INC.

[Name] 2400 Ellis Road, P.O. Box 13582

Durham Acc 27703

By: Vans

7/30/04

DAVID P. Flynn

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

REXAM BEVERAGE CAN COMPANY (on behalf of American Can Co.)
Name of Settling Party

| Address of Settling Party 4201 CONGRESS STREET. STE 340 | |
|--|---------|
| CHARLOTTE. NORTH CAROLINA 28209 | |
| Some L Vien Corporte Coursel and Arsitet Secrety, Rese | in Inc. |
| Signature | |
| James L. Iliser | |
| Printed Name of Signatory | |
| Corporate Counsel and Assistant Scenety, Rexam Inc. Title of Signatory | |
| 7-19-2004 | |
| Date | |

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

MRC Holdings Inc. (on behalf of American Can Co.)

Name of Settling Party

300 St. Paul Place
Address of Settling Party

Baltimore, Maryland 21201

Clart. O'Brien

Signature

Filen T. O'Brien

Printed Name of Signatory

Senior Vice President

Title of Signatory

July 12 2004

Date

| Se | qua Corpora | tion | | | |
|--------|------------------|--------|-------------|------|-------|
| | of Settling Pa | | | | |
| 3 1 | University | Plaza, | Hackensack, | , NJ | 07601 |
| Addre | ss of Settling | Party | | | |
| Signat | ure Donard P. Pa | Pouu | | | |
| | Name of Sig | | LSQ. | | |
| Sr. | Associate | Genera | 1 Counsel | | |
| | f Signatory | | | | |
| Date | | | | | |

| The | Solvents | Recovery | Service | of New | Jersey, | Inc. |
|-------|-------------------------|-------------|-----------|---------|---------|------|
| Nan | ne of Settli | ng Party | | | | |
| S-71 | | | * | | | |
| Add | ress of Sett | ling Party | | | | |
| 5400 | Legacy 1 | Drive | | | | _ |
| Clus | ster II, | Building : | 3 | | | _ |
| Plar | o, Texas | 75024 | | | | - |
| Sign | ature | Nh | Mr. | | | |
| | il W. Du | | | | | |
| Print | ted Name o | f Signatory | | | | |
| | President
of Signato | nt and Ass | sistant ! | Secreta | ry | - |
| Date | 7/15 | 1 | | | | |

| TECHNICAL COAT | INGS C | 0. | |
|-----------------------|-----------------|----------|---|
| Name of Settling Par | | | |
| | | | |
| Address of Settling P | arty | | - |
| _51 Chesinui Ridge I | | | _ |
| Montvale, NJ 0764 | 5 | | |
| Chilly 1 | 15 | Š | |
| Signature | 7.5 | | |
| Donald E. Devine, I | 1 | | |
| Printed Name of Sign | atory | | |
| Vice President and | <u> reasure</u> | r . | |
| Title of Signatory | 3: | 1 | |
| _July 13, 2004 | | | |
| Date | | | |

| | The | Sherwin-Williams | Company | | |
|-------|-------|--------------------------------------|-------------|-----|-----------|
| Na | me c | of Settling Party | | | |
| | | Prospect Avenue,
veland, OH 44115 | , N.W. | | |
| Ad | dres: | s of Settling Party | | | |
| A Sig | natu | Te S | | | _ |
| | Loui | s E. Stellato | | | |
| Pri | nted | Name of Signatory | | | |
| - | Vice | President, Gene | ral Counsel | and | Secretary |
| Titl | le of | Signatory | | | _ |
| Dat | te | - | | | |

| The Valspar Corporation (for Cilly Industries, Inc.) Name of Settling Party |
|---|
| Address of Settling Party 111715. MN 55415 |
| Folo: Payer, associate Cenual Coursell
Signature |
| Renda Bayer Printed Name of Signatory |
| Associate General Counsel Title of Signatory |
| 7 13 04
Date 13 04 |

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

Tuscan/Lehigh Dairies, Inc., f/k/a Tuscan/Lehigh Dairies, L.P.

C/o Dean Foods Company

Address of Settling Party
2515 McKinney Avenue, Suite 1200

Dallas, TX 75201

Signature

Edward Herman

Printed Name of Signatory

Authorized Signatory

July 15, 2004

Date

Name of Settling Party

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

U.S. Plastic Lumber Corporation (o/b/o its former division, S&W Waste, Inc.) Name of Settling Party

| 230 | 0 Glade | es Road | | - |
|-------|-----------|--------------|--------|---------|
| Addi | ess of Se | tiling Party | | |
| Sui | te 440 | West | | |
| | | | | |
| Boca | Raton | Florida | 33431 | 1 |
| , | 11 | | a | // |
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| / | Michael | UP. | SCHM. | DT |
| Print | ed Name | of Signatory | | 7-1- |
| | 590 2005 | | | |
| | 2.00 | 100 | | |
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| Title | of Signa | non! | Mar VI | Treat |
| Thie | or Signa | iory | | |
| | TINU | 1 16 20 | 14 | |
| 1 | 11100 | 10 // | 7 7 | |

Date

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

| VOLKSWAGEN OF AM | ERICA, INC. |
|--|-------------|
| Name of Settling Party | |
| 3800 Hamlin Road
Auburn Hills, MI 48326 | |
| Address of Settling Party | |
| Evelyn L. Sullen Printed Name of Signatory | Julean |
| rinited Name of Signatory | |
| Attorney | |
| Title of Signatory | |
| July 23, 2004 | |
| Date | |
| | |

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

| Whittaker Corporation Name of Settling Party | |
|---|------|
| 1955 N. Surveyor Avenue | |
| Address of Settling Party | |
| Simi Valley California 93063 | _ |
| Signature Signature | - |
| Eric G. Lardiere | |
| Printed Name of Signatory | |
| Vice President, Secretary & General Cour | isel |
| Title of Signatory | |
| 7.2 27 2004 | |
| July 27, 2004 | |

The signatory identified below certifies that he or she is fully authorized to represent the Settling Party in this matter, to agree to the terms and conditions of this Agreement on behalf of the Settling Party and to bind Settling Party to all of the terms and conditions of this Agreement. Settling Party agrees to enter into this Agreement and to be bound by its terms.

| Zeneca, Inc Cfor Converter's Jak Comp
Name of Settling Party | any |
|--|-----|
| 1800 Concord Pike Address of Settling Party Wilmington, DE 19850-5437 | - |
| Signature Signature | - |
| Kristopher J. Covi Printed Name of Signatory | |
| Attaney for Zeneca, Inc. Title of Signatory 7/28/04 | 2 |

APPENDIX A

Cash-Out Parties

- 1. Alumax Mill Products, Inc. (on behalf of Howmet Aluminum Corporation)
- 2. Borden Chemical, Inc.
- 3. Chemical Waste Management, Inc. (as successor to SCA Chemical Services, Inc.)
- 4. Conopco, Inc. (as successor to CPC International, Inc. and d/b/a Ragu Foods, Inc., Chesebrough Pond's, Inc. and Lever Brothers Company)
- 5. D. A. Stuart Oil Company
- 6. Engelhard Corporation
- 7. Ford Motor Company
- 8. General Motors Corporation
- 9. Honeywell International, Inc.
- 10. ICI Americas Inc.
- 11. Millennium Petrochemicals, Inc. (for U.S. Industrial Chemicals, PL)
- 12. Nestlė U.S.A., Inc. (for Buitoni Foods)
- 13. PPG Industries, Inc.
- 14. PRC-DeSoto International, Inc. (f/k/a Products Research and Chemical Corporation)
- 15. Reckitt Benckiser, Inc. (for Airwick Industries, Inc.)
- 16. Reichhold, Inc.
- 17. Rexam Beverage Can Company/MRC Holdings Co. (on behalf of American Can Co.)
- 18. Sequa Corporation/Sun Chemical Corporation
- 19. Solvent Recovery Services of New Jersey, Inc.
- 20. Technical Coatings Co.
- 21. The Sherwin-Williams Company
- 22. The Valspar Corporation (for Lilly Industries, Inc.)
- 23. Tuscan/Lehigh Dairies, Inc. (f/k/a Tuscan Lehigh Dairies, L.P.)
- 24. U.S. Plastic Lumber Corporation (o/b/o its former division, S & W Waste, Inc.)
- 25. Volkswagen of America, Inc.
- 26. Whittaker Corporation

APPENDIX B

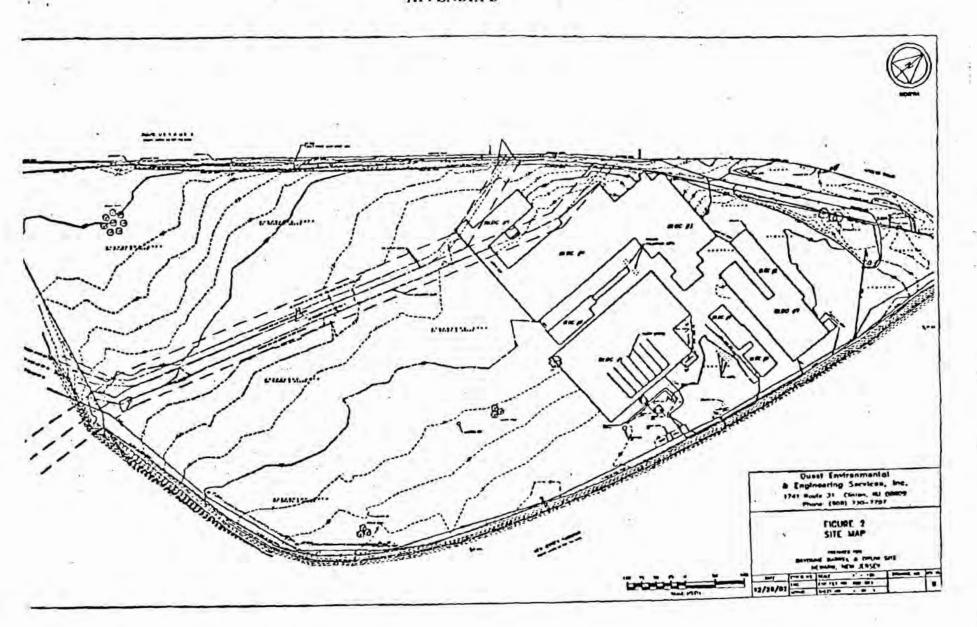
Performing Parties

- 1. Akzo Nobel Coatings, Inc. (for Reliance Universal)
- 2. BASF Corporation
- Chevron Environmental Company for itself and on behalf of Kewanee Industries, Inc. (for Colonial Printing Ink, Inc., U.S. Printing Ink, Inc., Onyx Chemical Company and Copygraphics)
- 4. E.I. du Pont de Nemours and Company
- 5. Hoffman-La Roche Corporation
- 6. Johnson & Johnson (for Personal Care Products Group, Inc.)
- 7. Kurz-Hastings, Inc.
- 8. Minnesota Mining & Mfg. Co. (a/k/a 3M Company)
- 9. Pharmacia Corporation (1/k/a Monsanto Company)
- 10. National Starch & Chemical Co.
- 11. Zeneca, Inc. (for Converter's Ink Company)

APPENDIX C

Settling Parties

All parties that appear in Appendixes A and B



APPENDIX E

Removal activities pursuant to Administrative Order on Consent, Docket No. CERCLA-02-2004-2006 to be included in calculation for determining the amount of the Final Payment (see Paragraph 16(i)):

- Removal of all liquids, solids and sludges from all above- and below-ground tanks and the oil/water separator located in the wastewater treatment area;
- Removal, cleaning and off-site disposal of all above- and below-ground tanks, the
 ash-collection tanks, and the oil/water separator, and all associated structures and
 above-ground plumbing and piping;
- Characterization and, if practicable, off-site disposal of approximately 300 cubic yards of PCB-contaminated waste piles;
- Repair, replacement and maintenance of perimeter fencing and gates;
- Inspection of, and sampling and abatement of asbestos in on-site structures,
- Demolition of all on-site structures and associated structures;
- Sampling of all potentially contaminated demolition debris to determine appropriate disposal
 options, and disposal of all demolition debris at appropriate off-site disposal facilities.

APPENDIX F

Documents Excepted from Paragraph 39

- Prior drafts of documents for which a last draft (document never made final) or final copy still exists;
- 2. Duplicates of documents maintained in other files;
- Original documents, copies of which are now maintained only on microfilm, microfiche,
 CD-ROM disc, or by other similar information archiving methods; or
- Original documents previously stored on archiving methods identified in 3 above, for which the microfilm, microfiche, etc. no longer exists, but from which hard copies printed from the microfilm, microfiche, etc. do exist.



How do I... Choose an option>>

Guide to Newark: Art & Culture

Newark offers a rich variety of quality entertainment and serves as the state's premiercenter for the performing and visual arts. If you would like to see your arts, culture or recreation center listed here, please complete the Arts Registration Form . Following is a listing of art, culture and recreation centers in Newark (Unless otherwise noted, the telephone numbers listed are area code 973).

- Arts & Culture
- Colleges & Universities
- Festivals, Parades Etc.
- B Hotels
- Landmarks & Points of Note
- B Parks
- Regional Excursions
- Restaurants
- Transportation

AFRICAN GLOBE THEATRE WORKS

611 McCarter Highway 624-1584

African Globe Theatre Works is an independent theatre company, which presents an annual season of productions by and about people of African descent. Programs include plays, comedy night shows, art and playwriting workshops, filmproductions, African dance classes and parties. Theater hours are: Monday through Saturday, 4:30 p.m.-10:30 p.m., and Sunday 2:30 p.m.-5 p.m.

ALJIRA: A CENTER FOR CONTEMPORARY ART

2 Washington Place 643-6877

This is a non-profit organization that offers monthly exhibitions and auctions with paintings and sculptures provided by local artists. Center hours are: Wednesday through Sunday, noon-6 p.m. Office hours are Monday through Friday, 9 a.m.-5 p.m. Artistic performances also are presented at Aljira.

ALL JERSEY MULTIPLEX

104-180 Foundry Street 817-8100

National Amusements, Inc. Opened its 12-theater multiplex in November 1991.

BBD000002

Conveniently located in the City's East Ward, the All Jersey Multiplex is accessible from the N.J. Turnpike and the New Jersey Transit's 1 Bus Line, which goes directly to the theater. The multiplex offers rocking chair seating for 3,400 patrons, convenient free lighted parking for more than 1,000 vehicles, a smoke-free environment, an art gallery, headphone systems for hearing impaired and Dolby stereo at all screens. Bargain matinees and gift certificates also are available.

THE ART GALLERY

87 Halsey Street 623-0062

Founded in 1961, The Art Gallery exhibits a wide range of original art that includes graphics, paintings and some sculpture by regional and world-class artists. Gallery hours are Monday through Friday, 10 a.m.-5:30 p.m., and Saturday 10 a.m.-3:30 p.m.

BRANCH BROOK PARK ROLLER SKATING CENTER

7th and Clifton Avenues 482-8900

The Branch Brook Park Roller Skating Center re-opened its doors in 1996 after a complete renovation. The 27,228 square-foot building is run by United Skates of America, Inc. and features a state-of-the-art sound system and parking for 102 vehicles. The facility is completely equipped with a pro shop, a skate rental area, refreshment stands, a room for private parties, vending machines and a game area.

THE CARTER G. WOODSON FOUNDATION

69 Lincoln Park 242-0500

Established to provide the general public with greater access to African-American culture through performing arts events, the Woodson Foundation is a multi-disciplinary arts organization- that administers Black Culture On Tour in America, the OnStage in New Jersey performance series and the Artists-In-The-Schools program. Hours are Monday through Friday, 9 a.m.-5 p.m.

CATHEDRAL CONCERT SERM

89 Ridge Street 484-4600 The Cathedral Concert Series is a cultural arts program based in Newark's Cathedral Basilica of the Sacred Heart. It presents a variety of choral and instrumental concerts throughout the year.

CITY WITHOUT WALLS

Gateway One 622-1188

Established in 1975, this not-for-profit gallery displays the artwork of young and emerging New Jersey artists. Although supported in part by the New Jersey Council on the Arts and the Dodge Foundation, City Without Walls is largely fundedthrough membership. Gallery hours are Monday through Friday, 10 a.m.-6 p.m., and Saturday, 11 a.m.-4 p.m.

THE GALLERY

The New Jersey Institute of Technology Student Center 323 Dr. Martin Luther King Jr. Boulevard 596-3605

Contemporary art, featuring water color and pastel paintings and photography, is displayed at this gallery. Students and local artists have exhibitions at various times throughout the year. Hours are Monday through Saturday 9 a.m.-6 p.m.

GALLMAN'S NEWARK DANCE THEATRE

1020 Broad Street 242-5351

Housed at Newark Symphony Hall, Gallman's Newark Dance Theatre is a company of 14 professional dancers from New Jersey's inner cities who are trained under a merit scholarship program at the Gallman's Newark Dance Theatre School.

THE GARDEN STATE BALLET COMPANY

45 Academy Street 623-0267

The oldest dance company in Newark offers performances throughout the state. An

annual series of free performances are offered in Newark, with some performances at Symphony Hall.

HALSEY STREET ART GALLERY

119 Halsey Street Newark, NJ 07102 824-6080

Open 9AM to 6PM

Our unmatched collection of Black/African American Art includes oil paintings, posters, lithographs, decorative ceramic plates and morel You are welcome to stop in The Halsey Street Art Gallery to see a variety of his work on display!

KIKAMO'S BLUES PEOPLE

808 South 10th Street 242-1346

Kikamo's Blues People is a cultural night spot housed at the residence of Amiri Baraka, a renowned playwright and poet. Saturday evening performances at 10 p.m. and midnight feature a variety of cultural entertainment including music, dance, theatrical and literary performances by local and nationally known artists.

THE NEWARK BOYS CHORUS SCHOOL

1016 Broad Street 621-8900

Educated in this academic training school, the critically-acclaimed Newark Boys Chorus provides entertainment and concerts for audiences of all ages throughout the world.

THE NEWARK COMMUNITY SCHOOL OF THE ARTS

89 Lincoln Park 642-0133

A school of fine and performing arts, the Newark Community School of the Arts

presents faculty performances, student recitals and an annual performances with all students. Every aspect of art is studied and presented through the school. Workshops and seminars are available. The Newark Community School of the Arts is thehome of the Community Theatre Ensemble which provides drama performances to the community.

NEWARK MEDIAWORKS

49 Washington Street 596-6550

A professional, non-profit media arts production center, MediaWorks is also a public relations and marketing firm whose clients are other non-profit groups.

THE NEWARK MUSEUM

49 Washington Street 596-6550

Founded in 1909, the Newark Museum underwent an extensive 520 million renovation and expansion in 1989, with 66 new galleries designed by the noted architect, Michael Graves. The American Institute of Architects selected this work for its prestigious 1992 Honor Award, a world-class recognition. The museum's world-famous collections include American Paintings and Sculpture, the Decorative Arts, the Arts of Africa, Classic Can, Numismatics, and the Arts of Asia, including the largest Tibetan collection in the Western Hemisphere. The Museum also features the 1885 Ballantine House restoration, a national historic landmark; the Dreyfuss planetarium; a Mini Zoo; and the Newark Fire Museum. Concerts, lectures, films and children's events are scheduled throughout the year, and the Museum Shops and Cafe offer services for visitors, Admission free,

THE NEWARK PUBLIC LIBRARY

5 Washington Street 733-7800

Since its formation in 1889, the Newark Public Library has developed an extensive book collection in addition to large periodical, picture, music, and video collections. It also houses the latest media and technical equipment. As the largest public library in the state, the Newark Public Library has 11 branches, a bookmobile and a Business Information Center. It has been designated a statewide resource center for both its complete run of U.S. Patent specifications and its New Jersey Reference Division. Hours vary for departments and branches. Call for information.

NEWARK SYMPHONY HALL

1020 Broad Street 643-8009

Built in 1925, Newark Symphony Hall is one of the state's major cultural centers, where audiences have enjoyed symphony, ballet, opera, professional theater groups and popular music programs. Architecturally, the building features a combination of Greek and Egyptian marble-columned, side promenades. Acoustically, the concert hall is considered by many to be one of the finest on the East Coast.

THE NEW JERSEY HISTORICAL SOCIETY

52 Park Place 596-8500

The New Jersey Historical Society is a state-wide, private, non profit historical museum, library, and archives dedicated to collecting, preserving, and interpreting the rich and intricate political, social, cultural and economic history of New Jersey to the broadest possible audiences. Founded in 1845, we examine who and what we are, what it means to live and work in New Jersey, what contributes to New Jersey's distinct identity, and what are the unique contributions New Jerseyans make to the region and the country.

Through the history of New Jersey - a quintessentially American place- the Historical Society promotes exploration of our cultures, past and present. As we challenge and inspire people to grow as learners and thinkers, we strive to make a difference in their lives.

The hours are:

Museum, Tues. through Sat. 10a.m. to 5 p.m.; Library, Tues. through Sat. 12 noon to 5p.m.;

Administrative Offices, Mon. through Fri. 9a.m. to 5p.m. or visit www.jerseyhistory.org

THE NEW JERSEY PERFORMING ARTS CENTER

McCarter Highway and Park Place 648-8989

Situated on a 12-acre site, the New Jersey Performing Arts Center (NJPAC) is the city's newest and largest cultural center and houses two beautiful theaters: the 2,750-seat Great Hall and the 500-seat Victoria Theatre. Each boasting the best in national and international artistry and a center stage for New Jersey's finest performers. NJPAC also includes two restaurants, a soaring rotunda, secured staffed parking, and a convenient arrival plaza.

THE NEW JERSEY STATE OPERA

1020 Broad Street 623-5757

Symphony Hall is the headquarters for this Class A State Opera Company. The company strives for excellence in the operatic medium and cultivation of the public's appreciation for the opera, and performs under Maestro Alfredo Silipigni.

THE NEW JERSEY SYMPHONY ORCHESTRA

The Robert Treat Center, 11th Floor 50 Park Place 642-3713

Newark is home base for the New Jersey Symphony Orchestra, considered one of the 30 major symphony orchestras in the country as defined by the American Symphony Orchestra League. The orchestra stages "Young Peoples' Concerts" in area schools and also performs in various concert halls throughout New Jersey, with its Major Concert Series and Winter Pops Series at Newark Symphony Hall.

OPERA/MUSIC THEATRE INTERNATIONAL

1016-18 Broad Street 596-1944

The Opera/Music Theatre International provides professional training for those on the threshold of operatic careers. Performances are presented in Newark Symphony Hall featuring the singers of the organization in leading roles.

RICHARDSON GALLERY

41 Halsey Street 596-1944

The Richardson Gallery specializes in oil paintings, lithographs, and engravings. Framing is done on the premises and some imported paintings are available.Gallery hours are Tuesday through Saturday, 10 a.m.-6 p.m.

THE ROBESON GALLERY

Rutgers University-Newark Student Center 305 Dr. Martin Luther King Boulevard 648-5970

With four to five exhibitions a year, running approximately two months each, the Robeson Gallery displays contemporary art, paintings and videos. Hours are Monday, Wednesday and Friday, 11:30 a.m.-5 p.m. and Tuesday and Thursday, 11 a.m.-6 p.m.

THE RUTGERS INSTITUTE OF JAZZ STUDIES

Rutgers University 110 Warren Street 648-5595

One of the nation's most important institutional jazz collections is housed at the institute, which contains more than 60,000 records and allied written articles. The collection contains 100 original Edison Phonograph cylinders, extensive clipping files, and jazz memorabilia that includes photographs, original manuscripts and instruments used by well-known musicians.

SONY THEATERS NEWARK METROPLEX

360-394 Springfield Avenue 642-5555/4708

Opened in April 1993, the six screen movie theater is owned by SONY Theaters, Inc., and it is located in the heart of Newark's Central Ward. The spacious metroplex features four 254-seat theaters, two 294-seat theaters, a smoke-free environment, state-of-the-art stereo surround sound in all auditoriums, handicapped accessibility and availability of headphones for the hearing-impaired. Bargain Matinees and gift certificates also are available.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION II EDISON, NEW JERSEY 08837

2 9 JUN 1999

Paul Harvey, Case Manager Bureau of Federal Case Management New Jersey Department of Environmental Protection P.O. Box 028 401 East State Street, 5th fl. Trenton, New Jersey 08625

Re: Bayonne Barrel and Drum Superfund Site, Newark, New Jersey

Dear Paul,

Enclosed you will find the reports and maps generated as a result of EPA's ground water monitoring activities at the Bayonne Barrel and Site. Also included is a tabulation of historic ground water monitoring data collected both on-site and on adjacent properties.

As a reminder, this data was collected based upon the comments provided by your Department in April of 1998 and in hopes of establishing a classification exception area.

Please review the enclosed reports and provide comment. Again, thank you for your assistance in this matter. Should you have any questions please feel free to contact me at (732) 906-6983.

Sincerely,

CC.

Joseph Cosentino, OSC

Removal Action Branch

M. Seidenberg, EPA

J. Haklar, EPA

S. Kehayes, NJDEP/BEECRA



Roy F. Weston, Inc. Federal Programs Division Suite 201 1090 King Georges Post Road Edison, New Jersey 08837-3703 908-225-6116 • Fax 908-225-7037

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM EPA CONTRACT 68-W5-0019

14 February 1999

Mr. Joseph Cosentino, On-Scene Coordinator U.S. Environmental Protection Agency Removal Action Branch 2890 Woodbridge Avenue Edison, N.J. 08837

EPA CONTRACT NO: 68-W5-0019

TDD NO: 02-98-09-0023

DOCUMENT CONTROL NO: START-02-F-03295

SUBJECT: BAYONNE BARREL AND DRUM - PROJECT REPORT

Dear Mr. Cosentino:

Enclosed please find the Project Report for START's determination of the flow direction and tidal influence of the groundwater at the Bayonne Barrel and Drum Site in Newark, New Jersey, from December 14-18, 1998.

If you have any questions, do not hesitate to contact me at (732) 225-6116.

Very truly yours, Roy F. Weston, Inc.

John F. Brennan

F . 1

cc: TDD File

PROJECT REPORT

SITE NAME:

Bayonne Barrel and Drum Site

TDD #: 02-98-09-0023

DCN #: START-02-F-03295

EPA I.D. NO .:

E,RS

PROJECT DATES:

December 14-18, 1998

1. Site Location:

150-154 Raymond Boulevard

Newark, Essex County, New Jersey

2. Project Description:

Refer to Table 1 for Static Water Level Data and Table 2 for

Groundwater Elevations

3. On-Site Personnel:

Name

Affiliation

Duties on Site

John F. Brennan Keith Olinger Anthony Vandeven START II START II

Project Manager Datalogger Installation

ndeven START II

Datalogger Collection

4. Project Notes / Site Background:

START was tasked by the Environmental Protection Agency (EPA) to determine groundwater flow direction at the Bayonne Barrel & Drum Site. In addition, START was asked to make a determination as to whether the groundwater was tidally influenced. These events were to follow the sampling of the eleven monitoring wells on site, which took place the week of November 29, 1998.

The site is located at 150 - 154 Raymond Boulevard in Newark, New Jersey, and occupies approximately 15 acres of Block 5002, Lots 3 and 14. The site is bounded by Raymond Boulevard and an exit ramp from Routes 1 and 9 to the north and west respectively; an entrance ramp to the New Jersey Turnpike to the east and the south; and a movie theater parking lot to the southwest. Topographically, the site is relatively flat with a slight undulating slope toward the east and northeast. Elevations on the property range from 5 to 20 feet above sea level. Several buildings remain on the property which were formerly utilized for drum reconditioning. The area on and around the site was once a tidal wetland (flood plain of the Passaic River). Therefore, most of the soil present at the site and surrounding properties consists of historic fill material. These fill materials include fill associated with the former City of Newark landfill and bottom ash from a power plant.

5. Project Summary:

START activities were conducted on-site from December 14-18, 1998. The following is a summary of the events that took place.

A. TIDAL INFLUENCE

START was tasked by the EPA to determine whether the groundwater at the Bayonne Barrel & Drum Site was tidally influenced. The EPA originally requested a 24-hour static water level survey to complete this determination. However, since the site is also under the review of the New Jersey Department of Environmental Protection (NJDEP), START recommended that the static water levels be recorded for at least a 71-hour period as per the Technical Requirements For Site Remediation (N.J.A.C. 7:26E-4.4(h)3ii(3)). START collected data from the monitoring wells for a 96-hour period to insure that an accurate picture of the groundwater's static water level could be drawn. The On-Scene Coordinator agreed with this change.

Static Water Level Determination

Five of the eleven monitoring wells on-site were chosen for the static water level survey. Monitoring wells WELL-A, MW-29WA, and 2614920 were chosen so that the water level data could also be used to triangulate the groundwater flow direction. Monitoring wells LB-MW3 (shallow) and BBD-C3 (deep) were chosen so that a comparison could be drawn between the movement of the groundwater in a deep and a shallow monitoring well.

TABLE 1 STATIC WATER LEVEL DATA

| I | Monitoring Well ID | Depth to Water (TIC) at Test Initiation (feet) | Depth of Well (feet) | 1 |
|---|--------------------|--|----------------------|----|
| | BBD-C3 | 5.64 | 46.75 | 5 |
| | WELL-A | 8.59 | 19.5 | 5 |
| | 2614920 | 11.92 | 19.58 | 5 |
| | 29-WA | 9.40 | 17.0 | 3 |
| | LB-MW3 | 4.17 | 12.7 | 3. |

The static water level determination was conducted during the week of December 14, 1998. The weather for that week was fair, with the exception of Thursday, December 17, 1998, when there were a few light rain showers. The total precipitation for that day as measured at Newark Airport was 0.02 inches, which also happened to be the total precipitation level for the entire study period. To put this in perspective, during the month of December 1998, a total of 1.03 inches of precipitation (water equivalents) was recorded at Newark Airport. Attachment H lists the precipitation levels for December 1998 on an hourly basis. In-Situ SP-4000 "Troll" Dataloggers were used to record the static water levels of each monitoring well every 0.5 hour. Data was collected from 1030 Monday, December 14, to 1030 Friday, December 18, 1998. The dataloggers were locked in each monitoring well and left on-site for the full survey period. START returned to the site on Friday, December 18, 1998, to download the data and collect the dataloggers. The tabulated data for the five monitoring wells surveyed can be found in Attachment A.

The following is an analysis of the static water level data collected:

Monitoring Wells: BBD-C3, WELL-A, 2614920

The data collected from monitoring wells BBD-C3, WELL-A, and 2614920 was very similar. This data is graphically illustrated in Attachments B and C*. Analysis of the graphs presented in Attachment C illustrates that the water levels at all three monitoring wells changed (increased/decreased) in a relatively similar pattern. In general, the water level decreased for the first 16 hours, and then steadily increased until about 80 hours at which point the water level sharply decreased for the remainder of the measurement period. The maximum and minimum static water levels for each of the three monitoring wells can be found in Table 2. The maximum total change for any of the three monitoring wells was approximately 0.3 feet, or 4 inches from start to finish.

*Note - Attachment B includes all of the data points collected at the Bayonne Barrel and Drum Site the week of December 14, 1998, graphically plotted on a time versus static water level scale. Some of these graphs list more than a 96-hour period. The reason for this is that the dataloggers were started at different times (the software allowed for only one datalogger to be installed at a time). The common 96-hour study period for all of the dataloggers was 1030 Monday to 1030 Friday. This data is graphically listed in Attachment C (Test Data) and gives a more representative picture of the changing static water levels in all of the monitoring wells.

Monitoring Wells: LB-MW3, MW-29WA

The data collected from monitoring well MW-29WA showed virtually no change in static water level (flat line). The static water levels collected from monitoring well LB-MW3 changed slightly, but did not follow the trends found in monitoring wells BBD-C3, WELL-A, 2614920. The static water level changes for all of the monitoring wells can be found in Table 2. Unfortunately, the scattered data did not allow for any correlation to be drawn between the BBD-C3 (deep well) and the LB-MW3 (shallow well).

TABLE 2 DATALOG TEST DATA

| Monitoring
Well ID | Depth to Water (TIC)
at Test Initiation
(feet)
12/14/98 @ 1030 | Maximum Water
Level Change
(feet) | Minimum Water
Level Change
(feet) | |
|-----------------------|---|---|---|--|
| BBD-C3 | 5.64 | (+0.148) | (-0.104) | |
| WELL-A* | 8.59 | (+0.223) | (-0.094) | |
| 2614920 | 11.92 | (+0.189) | (-0.067) | |
| 29-WA | 9.40 | (+0.023) | (-0.002) | |
| LB-MW3 | 4.17 | (+0.039) | (-0,113) | |

^{*}MW Well-A was tested at 1040 (not 1030) and every 0.5 hour thereafter.

Surrounding Waterways

Analysis of United States Geological Survey (USGS) 7.5 minute Quadrangle Maps (1981) indicates that the Passaic River is located north and east of the Bayonne Barrel and Drum Site. The Passaic River flows eastward passing approximately 0.5 miles from the site's northern border, then turns south and flows approximately 0.5 miles from the eastern border of the site. Eventually, the river empties into Newark Bay, less than 2 miles southeast of the site.

Daily Tidal Data

Predicted daily tidal data was collected for the week of December 14, 1998, and is presented in Attachment F. The data was obtained from the National Oceanic and Atmospheric Administration (NOAA). The data is from a location (Gregory Avenue Bridge) located upstream on the Passaic River, approximately ten miles north of the Bayonne Barrel and Drum Site.

The predicted high and low tide times for each day were compared to the static water level data generated at the Bayonne Barrel and Drum Site.

Final Determination

Based on all of the existing data, it does not appear as if the monitoring wells located at the Bayonne Barrel and Drum Site are tidally influenced. The maximum change in static water level for any of the five monitoring wells studied was just 0.3 feet, whereas the tidal fluctuation of the nearby river is more than 5 feet. The tidal fluctuation noted at the Gregory Avenue Bridge correlates well to tidal datums collected by NOAA at Point No Point, on the Passaic River (Attachment I). This collection point is located less than a mile east of the site. The predicted tidal data for a location 10 miles north of the site (Gregory Avenue Bridge) does not correlate well with the static water level changes recorded for any of the monitoring wells studied. In addition, none of the data collected at the Bayonne Barrel and Drum Site followed any of the traditional synoptic tidal patterns.

Based on a review of the observations at Point No Point, the predicted data at the Gregory Avenue Bridge and the proximity of the Passaic River to the site, one may theorize that the site in some manner must be tidally influenced. However, the data collected during this study did not produce any evidence to support this theory. One possible explanation may be the depth of the monitoring wells on-site. All of the monitoring wells are relatively shallow (see Table 1), with the deepest well ending at 46.75 feet. This may not be deep enough to show the effects of the tidal fluctuation. Nonetheless, for the purposes of this study, the author must conclude that the monitoring wells located at the Bayonne Barrel and Drum Site are not significantly tidally influenced.

B. GROUNDWATER FLOW DIRECTION

The data collected during the static water level investigation was used to determine general groundwater flow direction across the site. Three of the monitoring wells investigated were pre-chosen for this purpose (2614920, WELL-A, and MW-29WA). However, analysis of the data indicated that the static water level of monitoring well MW-29WA did not change during the 96-hour investigation, relative to the movement in the other monitoring wells. This could be due to excessive sedimentation of the well screen or the local presence of finer-grained soils at that location. Therefore, the data collected from monitoring well MW-29WA was discarded for flow direction determination purposes. The data collected from monitoring well BBD-C3 was used instead. The location of monitoring well BBD-C3 still allowed for groundwater flow direction determination via triangulation.

The groundwater elevations of the three monitoring wells used in the flow direction determination are listed in Table 3 below. The groundwater elevations were determined using the static water level data collected during the week of December 14, 1998, and the survey data which was collected by Summit Drilling Company, Inc. The survey data is listed in Attachment D.

For groundwater flow direction determination, the static water level data collected at 1200 on Monday, December 14, 1998, was used. This allowed each well at least 1.5 hours to acclimate to the placement of the datalogger (the manual recommends 1.0 hour). Table 3 illustrates that for the three monitoring wells used, the flow direction would not change significantly if it was measured (at 1200) on any of the other days on which data was collected. All three of the wells changed relatively uniformly during the 96-hour measuring period.

From the groundwater elevation data, a groundwater contour map was created. This map was created using Surfer v6.0 (Golden Software, Inc.) and can be found in Attachment G. The groundwater elevations were calculated by subtracting the Depth to Water (DTW) for each monitoring well from the Monitoring Well Elevation measured at the top of the PVC (inner) casing. Groundwater generally flows perpendicular to the contours, from a higher to a lower gradient. Analysis of the groundwater flow contours across the Bayonne Barrel & Drum Site indicates that general groundwater flow is northeast, toward the Passaic River.

TABLE 3
GROUNDWATER ELEVATIONS
BAYONNE BARREL & DRUM SITE

| Monitoring Well ID | BBD-C3 | WELL-A | MW-2614920 |
|-----------------------|--------|--------|------------|
| Groundwater Elevation | 2.58' | 2.87' | 2.76' |
| 12/14/98 1200 | | | |
| Groundwater Elevation | 2.61' | 2.93' | 2.79' |
| 12/15/98 1200 | | | |
| 24 Hour Change | +0.03' | +0.06' | +0.03' |
| Groundwater Elevation | 2.72' | 3.05' | 2.9' |
| 12/16/98 1200 | | | |
| 24 Hour Change | +0.11' | +0.12' | +0.11' |
| 48 Hour Change | +0.14' | +0.18' | +0.14' |
| Groundwater Elevation | 2.78' | 3.09' | 2.93' |
| 12/17/98 1200 | 7 7 7 | | |
| 24 Hour Change | +0.06' | +0.04' | +0.03' |
| 72 Hour Change | +0.20 | +0,22 | +0.17 |

^{*}Note - Groundwater Elevation is calculated by subtracting the Depth to Water (DTW) from the Monitoring Well Elevation measured at the top of the PVC (inner) casing

5. Report Prepared by:

Report Reviewed by: 6.

Thomas O'Neill, START Group Leader

POLLUTION PREVENTION AND MANAGEMENT STRATEGIES FOR DIOXINS IN THE NEW YORK/NEW JERSEY HARBOR

August 2006

by Gabriela R. Muñoz Marta A. Panero (NYAS)

with a preface by Dr. Charles W. Powers Chair of the Harbor Consortium

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agency decided a regulation was not necessary, based on apparent declining trends of dioxins in sludge and the increases in cancer incidence expected from land application of sludge, as calculated in the risk assessment [319]. However, a 2004 review of studies that had measured dioxin concentrations before and after sludge application found that, on average, sludge increased soil dioxin levels ~7 times [233]. This review concluded that sewage sludge application to agricultural soils may have a slight impact on dioxin levels in most food and forage crops, but the impact on animal tissue levels is likely much greater [233]. They also identified gaps in available data and indicated the need for more controlled studies measuring the effects of sewage sludge application on dioxin levels in food [233].

Measures to Reduce Dioxin Emissions Associated with Sewage Sludge

Air dioxin emissions related to the management of sewage sludge at incinerators have been discussed in the combustion section. The current section focuses on sewage sludge management other than combustion. Preventing dioxins at the primary source from discharging to waste water treatment plants has the following benefits:

- It reduces dioxin concentrations in sewage sludge and, consequently, loadings to soil. It could eliminate the concern about applying sewage sludge to agricultural fields.
- It decreases waste water and sludge³⁴¹ effluent concentrations, reducing loadings to nearby water bodies.

Specific recommendations include:

- Provide funding to undertake track-down projects (for a range of contaminants) to identify primary sources to POTWs:
 - Monitor influents and effluents to waste water treatment plants in regions where higher dioxin concentrations have been found in sludge.
 - Consider integrating industrial ecology principles to track-down efforts.

- Work with pertinent agencies to limit the allowable residual dioxin found in garments and fabrics with dioxin-containing dyes, pigments, and pesticides.
- Consider incentives for industry involved in pollution prevention and source reduction efforts leading to "zero emissions discharge" (ZED) for wastewater discharges, including dioxin and other persistent bioaccumulative toxics (PBTs).

C.3. Historical sources

Ongoing sources of dioxins to air identified to date account for 10-25% of this contaminant's estimated global deposition from the atmosphere [260,334]. The remainder is believed to be associated with historical sources—dioxins that have been released in the past and are now being remobilized [28]. These historical sources include contaminated sites, sediments, and landfills. In addition, it is possible that some major sources have not yet been identified.

C.3.a. Contaminated Sites in the Watershed

Previous NY/NI Harbor studies on PCBs and cadmium indicate that historical contaminated sites in the Harbor watershed may continue to be sources of these contaminants to the present [16,21,219]. Dioxins are no exception to this pattern. Numerous Superfund, brownfield, and contaminated sites in the Watershed that are contaminated with dioxins are either known, or have the potential, to be sources of dioxins to the air, water, and sediments of the Harbor (see Map 5). The National Priorities List (NPL) identifies 18 dioxin-contaminated sites in the Watershed region (2 in NY and 16 in NJ).342 Remedial measures (by removal or containment of the contaminated materials) have taken place in at least four of these sites. In addition, other sites contaminated with dioxins have been identified in NJ through the New Jersey Phase I and Phase II Dioxin Study conducted in 1983 and 1985, respectively.343 Although many of these sites have been remediated, residual dioxin contamination may remain. 344

^{340.} An additional 0.003 cases/yr for the most exposed population (people using sludge as a fertilizer for crops and animal feed and consuming their own products). Incidence on the general population is expected to be lower [319].

^{341.} During wet weather events, some sludge may be discharged in the effluent.

^{342.} One of these sites (W A Cleary) is not listed in the NPL list. Information was provided by Anne Hayton, NJ DEP.

^{343.} Anne Hayton, Technical Coordinator, Bureau of Environmental Evaluation and Risk Assessment, Site Remediation Program, NJ DEP. Personal communication, March 6, 2006.

^{344.} Jon Josephs, Hazardous Substances Technical Lieison, U.S. EPA Region 2. Comments submitted on Aug. 12, 2005.

Map 5. Dioxin-contaminated Superfund sites in the Watershed



Addresses from NPL list.

Table C. 34 shows all the dioxin-contaminated sites we have been able to identify. Data has not been updated to confirm the current status (vis-à-vis remediation) of sites shaded in gray.³⁴⁵

Currently, there are no estimates of the importance of all these contaminated sites to the overall inputs of dioxins to the Harbor, although the individual contribution of certain sites (e.g., the Diamond Alkali Superfund site) has been better characterized and is described below.

It is very difficult to determine the amount of toxics that are re-mobilized from contaminated sites to the environment. Relevant pathways for land sites include soil runoff and transport by wind, leaching to groundwater, and volatilization. 346 For contaminated sediments, remobilization may involve desorption from sediments into the water column; resuspension of settled sediments; and dredging and disposal of contaminated sediments.

At least one initiative has modeled contributions from on-land contaminated sites to runoff. This model was developed by the Delaware River Basin Commission to estimate the amount of PCBs reaching the Delaware River from contaminated sites runoff using the Universal Soil Loss Equation (USLE) (see Box 7). Although there is great uncertainty in the estimated loads, this attempt can give an idea of the order of magnitude of the inputs. A similar approach was followed for the NY/NJ Harbor Watershed to estimate dioxin runoff.

Soil runoff for three sites in the Watershed was estimated using software that applies a revised version of USLE (RUSLE 2, see Box 7).³⁴⁷

Table C. 35 shows suspended solids delivery (i.e., the amount of soil detached and transported to the end of the slope) and dioxins mobilized by

runoff. Estimated dioxin releases from these three sites are significant and put in perspective the potential impact that the tens of contaminated sites may have collectively. If the necessary data were available, applying RUSLE2 to all these sites could refine the overall picture. It should be noted that RUSLE2 calculates soil delivery at the end of a slope. The amount that actually reaches a given water body will depend

^{345.} Information posted online for Superfund sites was reviewed but was often found to be outdated. Several site managers were contacted, and a few were able to provide further data. Additional facts were obtained for a handful of sites by reviewing files requested through the Freedom of Information Act (FOIA) and Open Public Records Act (OPRA).

^{346.} Given the low vapor pressures and water solubility of dioxins, volatilization and leaching are likely negligible pathways, although leaching can be enhanced under certain conditions such as presence of organic liquids (see section on Fate and Transport).

^{347.} We received assistance from Tibor Horvath (Conservation Agronomist, USDA Natural Resources Conservation Service) to select the appropriate input parameters for the program.

Table C. 34. Known dioxin-contaminated sites in the Watershed

| Name | City | State | County | Type of site | Notes |
|---|-------------------------|-------|------------|--------------|---|
| Niagara Mohawk Power Corp | Saratoga Springs | NY | Saratoga | NPL | |
| Ramapo Landfill | Ramapo | NY | Rockland | NPL | |
| American Cyanamid Co | Bound Brook | NJ | Somerset | NPL | |
| Asbestos Dump | Millington | NJ | Morris | NPL | |
| Brook
Industrial Park* | Bound
Brook | ИJ | Somerset | NPL | Remediated. (Blue Spruce International is part of this site). Levels were ~100 ppb TCDD. |
| Caldwell Trucking Co. | Fairfield | NJ | Essex | NPL | |
| Chemical Insecticide Corp.a | Edison | NJ | Middlessex | NPL | Remediated |
| Chemsol, Inc. | Piscataway | NJ | Essex | NPL | |
| Curcio Scrap Metal, Inc. | Saddle Brook Twp | NJ | Bergen | NPL | |
| Diamond Alkali* (land site only) ^{a,b} | Newark | ИĴ | Essex | NPL | Enclosed in concrete (all sides and cap). Groundwater is pumped, treated, and discharged to Passaic. Levels were 50,000 ppb TCDD. |
| Dover Municipal Well | Dover Township | NJ | Morris | NPL | |
| Evor Phillips Leasing | Old Bridge Township | NJ | Middlesex | NPL | |
| Fried Industries | East Brunswick Township | NJ | Middlesex | NPL | |
| Global Sanitary Landfill | Old Bridge Township | NJ | Middlesex | NPL | |
| Higgins Farm | Franklin Twp | NJ | Somerset | NPL | *** |
| Myers Property ^a | Flemington | NJ | Hunterdon | NPL | Remediated to <1 ppb TCDD. |
| PJP Landfill | Jersey City | NJ | Hudson | NPL | |
| W A Cleary ^a | Edison | NJ | Middlessex | NPL | ~ 35 ppb TCDD |
| Atlantic Resources, Inc.* | Sayreville | NJ | Middlessex | NJ DEP | Dioxin levels <1 ppb, not considered dioxin site. No remedial action. |
| Bayonne Barrel and Drum | Newark | NJ | Essex | NJ DEP | 20-900 ppb TEQ |
| Brady Iron and Metals | Newark | ИЛ | Essex | NJ DEP | Remediated to <20 ppb at the most.
Level not available but likely was
100-200 ppb TCDD. |
| Economics Laboratory ^a | Avenel | NJ | Middlessex | NJ DEP | 20 ppb remediated to <1 ppb. |
| Givaudan Chemical ^a | Clifton | NJ | Essex | NJ DEP | Remediated (excavated and placed in on-site "vault"). Levels used to be ~63ppb TCDD. |
| Pratt-Gabriel Company | Paterson | ľИ | Passaic | NJ DEP | Remediated. Was 39 ppb TCDD. Capped
in place but NJ DEP needs to return and
check. |
| Prentiss Drug & Chemical
(a.k.a. Albert Steel Drum) ^a | Newark | ИЛ | Essex | NJ DEP | Remediated: Levels were ~248 ppb
TCDD. Removed and capped, currently
up to 20 ppb below cap. |
| Rockland Chemical* | West Caldwell | LN | Essex | NJ DEP | 1.3 ppb remediated to < 1 ppb |
| Schnitzpahn Garden Center ^a | Greenbrook | NJ | Middlessex | NJ DEP | Remediated. Levels were <50 ppb. Dioxins contained in shed. |
| Sherwin Williams | Newark | NJ | Essex | NJ DEP | |
| Standard Chlorine | Kearny | NJ | Hudson | NJ DEP | 60 ppb TCDD. Has open soil and la-
goons w/ dioxins. |
| US Metals & Refining | Carteret | NJ | Middlessex | NJ DEP | Re-developed. No contaminated soils are exposed. |

Sites were identified by querying the National Priorities List (NPL) for all sites in NY and NJ, and through personal communication with Jon Josephs, Hazardous Substances Technical Liaison, U.S. EPA Region 2. Sources of additional information: *Anne Hayton, Technical Coordinator, Bureau of Environmental Evaluation and Risk Assessment, Site Remediation Program, NJ DEP; *Alice Yeh, Project Manager, Emergency and Remedial Response Division, EPA Region 2; *Jim Kealy, Technical Coordinator, NJ DEP; *Paul Harvey, Case Manager, NJ DEP.

^{*} This site also includes contaminated sediments in the Passaic River and Newark Bay,

BOX 7: USING USLE TO CALCULATE DELIVERY OF CONTAMINANTS AT-TACHED TO SOIL IN RUNOFF

The Universal Soil Loss Equation (USLE) is an empirical equation that allows predicting average annual soil loss by runoff based on a series of parameters that take into account soil and site characteristics:

Soil Loss = R x K x LS x C x P.

where R = rainfall erosivity factor (a measure of the extent to which rain will cause soil particles to detach and move that depends on rain intensity, quantity, and duration at a given location); K = soil erodibility factor (measure of the soil's susceptibility to erosion, varies with soil texture, organic matter, and other characteristics); LS = topographic factor (combines the effect of slope steepness and length); C = surface cover factor (takes into account whether the soil is protected by vegetation or other covers); P = management factor (accounts for practices that attenuate soil loss such as terraces or vegetated strips).

This equation was originally proposed in the 1970s; the factors were based on empirical observations. The equation and factors have since been refined, and software has been developed that handles the increasingly complex calculations. The latest version is RUSLE2 (Revised USLE). This tool is commonly used in conservation planning. For instance, the software allows calculating and comparing soil loss for a given location (usually agricultural land) under different scenarios to determine what set of management practices will be most effective in reducing erosion to acceptable limits. These management practices include different crop rotations, crop row orientation, and reduced tillage.

RUSLE2 software and databases for different geographical areas are available for download at the USDA-ARS National Soil Erosion Research Laboratory, Purdue University website (http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm) along with training materials. These databases contain the information that the program needs to calculate the different factors in the equation based on the geographical region and site attributes.

The amount of dioxins (or other contaminants) mobilized annually by soil runoff from a given site or area can be calculated as:

Dioxins in Runoff = Soil Loss x Contaminated Area x Dioxin Concentration in Soil

on the proximity, presence, and discharge location of catch basins; whether there are any barriers to contain runoff; and other site characteristics. The Bayonne site is located ~1,800 ft from the Passaic River. Several storm water catch basins (simple conduits for storm water and suspended particles) collect surface runoff. The exact discharge locations are unknown, but it is possible that they empty directly or indirectly into drainage ditches that are connected to the Passaic River.³⁴⁸

The Standard Chlorine site is located within the floodplain of the Hackensack River [54]. Surface run-

off is collected in a ditch that runs along the site and discharges into the river [54]. The plant disposed of some of its wastes in two lagoons located in a small area next to the river, ~3 ft above its level. The sediments in the lagoons contain ~60 ppb of TCDD [54]. Soil around the lagoon had detectable levels of TCDD (0.52 ppb) [54]. Soil along the ditch collecting runoff from the lagoon area had TCDD at the ppt level and total TEQs of 1–2 ppb, 350 suggesting that either dioxin concentrations around the lagoon were actually higher or that some of the lagoon contamination was reaching the ditch. The runoff model was applied

^{348.} A dye study will be conducted to determine the exact discharge location. Sediments and fish have reportedly been seen in these catch basins, indicating a potential connection to close-by drainage ditches that lead to wetlands and, eventually, the Passaic River. (Jim Kealy, Technical Coordinator, NJ DEP. Personal communication, January 30, 2006).

^{349.} Dioxins were below the detection limit in five out of six samples, but these were recognized to be biased low [54].

^{350.} Data was part of site files provided through an OPRA request.

only to soils around the lagoons (~25% of the whole site), assuming 0.52 ppb TCDD and extrapolating other congeners according to the ditch samples.³⁵¹ This estimate does not include dioxins that may be carried with lagoon sediments mobilized during heavy rain events or flooding. In addition, this site contains many other contaminants including PCBs, PAHs, and chromium (Cr).³⁵²

The Sherwin Williams site, located by the Passaic River, comprises two small areas with dioxin contamination. These areas are surrounded by vegetated sections that may intercept dioxins in runoff.

Because furans are always present in PCB fluids, PCB-contaminated sites are also expected to be sources of dioxins to the Harbor, and even larger sources of dioxin-like PCBs. Preliminary calculations presented in our previous report [219] suggest that PCB remobilization from contaminated land sites in the Watershed can potentially contribute large amounts of PCBs to the Harbor³⁵³ and therefore also contribute dioxins.

Diamond Alkali Superfund Site354

The Diamond Alkali Superfund site, one of the most heavily dioxin-contaminated sites in the country, is located within the NY/NJ Harbor. The manufacture of phenoxy herbicides at 80 Lister Avenue in Newark, NJ (next to the Passaic River) started before 1951, when Kolker Chemical owned and operated the site. 355 From 1951 to 1969, the Diamond Alkali Company (later known as Diamond Shamrock Chemicals Company) manufactured phenoxy herbicides and other chemicals: The facility produced DDT and so-

dium 2,4,5-trichlorophenate, which was then used to synthesize 2,4,5-trichlorophenoxyacetic acid (2,4,5-T). Dioxins, especially 2,3,7,8 TCDD, were generated as an unwanted by-product of this process, as shown in Box 8. Until 1969, an estimated 800 tons of 2,4,5-T were produced per year [17]. A mixture of 2,4,5-T with 2,4-D was widely used in the middle of the 20th century, especially as a defoliant during the Vietnam War and, to a lesser extent, the Korean Wars. The drums containing herbicides were marked with a

BOX 8

These figures show how sodium 2,4,5-trichlorophenate (an intermediary in 2,4,5-T synthesis) is produced, and the side reaction that leads to 2,3,7,8 TCDD formation. At temperatures >150°C, dioxin formation greatly increases. Reaction temperatures at the plant fluctuated, but often reached 180°C [247].

Sodium 2,4,5 trichlorophenate 2,3,7,8 TCDD

Table C. 35. Dioxins remobilized from selected contaminated land sites

| Site name | Area (acres) | Soil loss
(kg/acre/yr) [†] | Dioxin concentration
(μg TEQ/kg) [†] | Dioxins in runoff
(g TEQ/yr) ³⁵⁶ |
|-----------------------|--------------|--|--|--|
| Bayonne Barrel & Drum | 16 | 1,996 | 20-900 | 1-9 |
| Standard Chlorine | 5.6 | 6,260 | 94 | 3 |
| Sherwin Williams | 0.4 | 5,080 | ~6-115 | 0.006 |
| Total for the 3 sites | 22 | | | 3-12 |

[†] From RUSLE2

* Bayonne site: 17,000 cubic yards of soil contain 20 ppb TEQ while ~6,000 cubic yards contain >80 ppb. The maximum concentration is 900 ppb. Based on this, it was assumed that 74% of the site has dioxin concentrations ranging from 20 to 80 ppb and 26% of the site has 80–900 ppb.

§ Mean at each of two areas with dioxin contamination.

^{351.} Four samples taken from the ditch had virtually the same concentrations and congener profiles.

^{352.} The site is covered by 5-10 feet of fill containing Cr-lader slag, a residue of Cr purification at an adjacent facility [54].

^{353.} The mass balance for dioxins has determined that coplanar PCBs account for ~40% of the dioxin-like compounds (expressed in TEQs) entering the Harbor from the Hudson River (See Appendix A). This River accounts for ~20% of the coplanar PCBs entering the Harbor In a TEQ basis, while NJ Rivers, water treatment plants, CSOs, and runoff (which may include contributions from land-contaminated sites) explain another 70%.

^{354.} The information in this description is taken from: NJ DOH (1995 and 1996) [169,170] and EPA (1984) [292],

^{355.} Jon Josephs, Hazardous Substances Technical Liaison, U.S. EPA Region 2, Comments submitted on August 12, 2005.

^{356.} This total amount of dioxins in runoff includes 0.02 g/yr TCDD; 0.6-5 g/yr TCDF; and 1-4 g/yr of PeCDF for the two sites combined. These congeners are driving toxicity in biota in the NY/NJ Harbor.